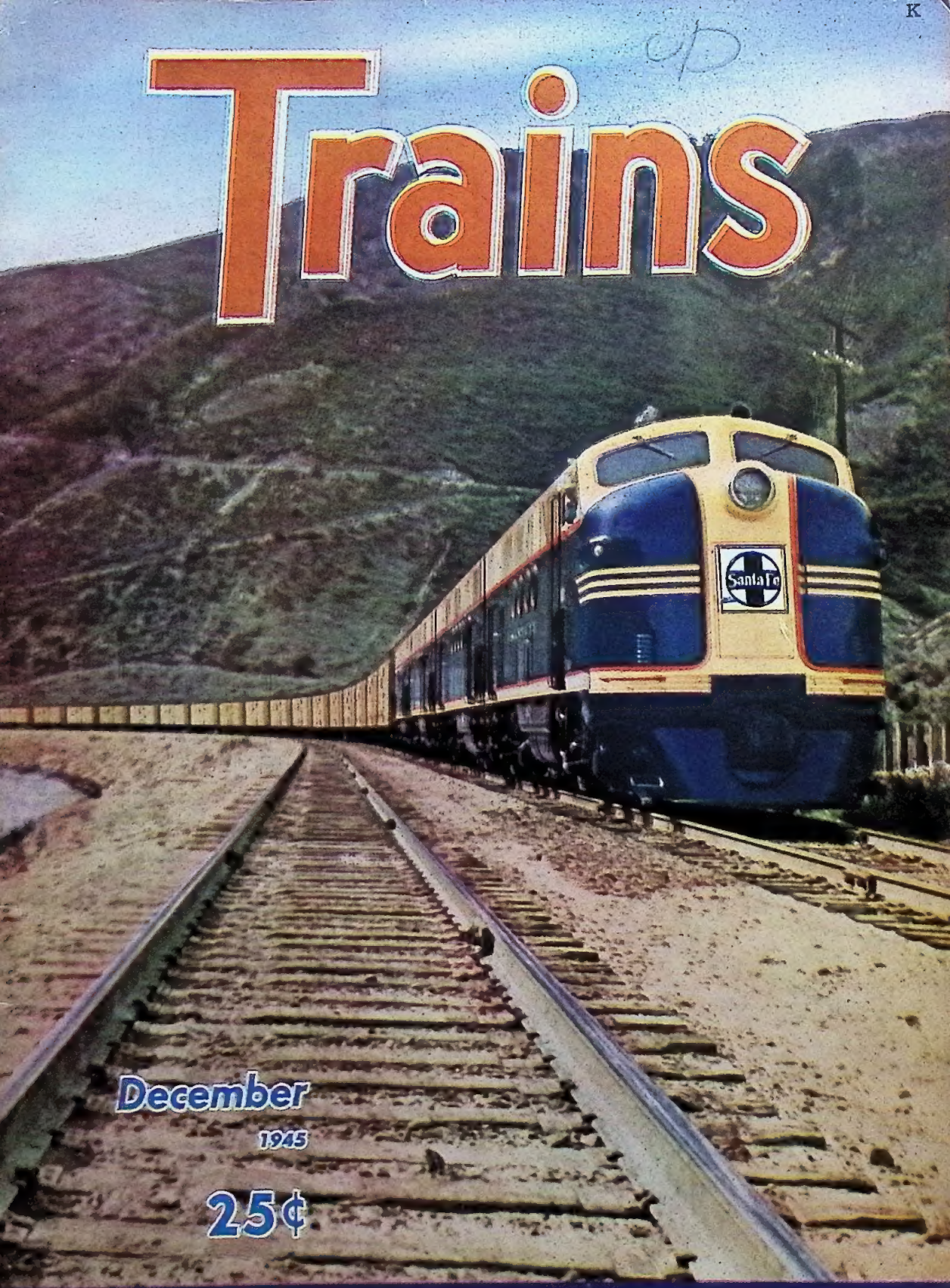
Trains



December

1945

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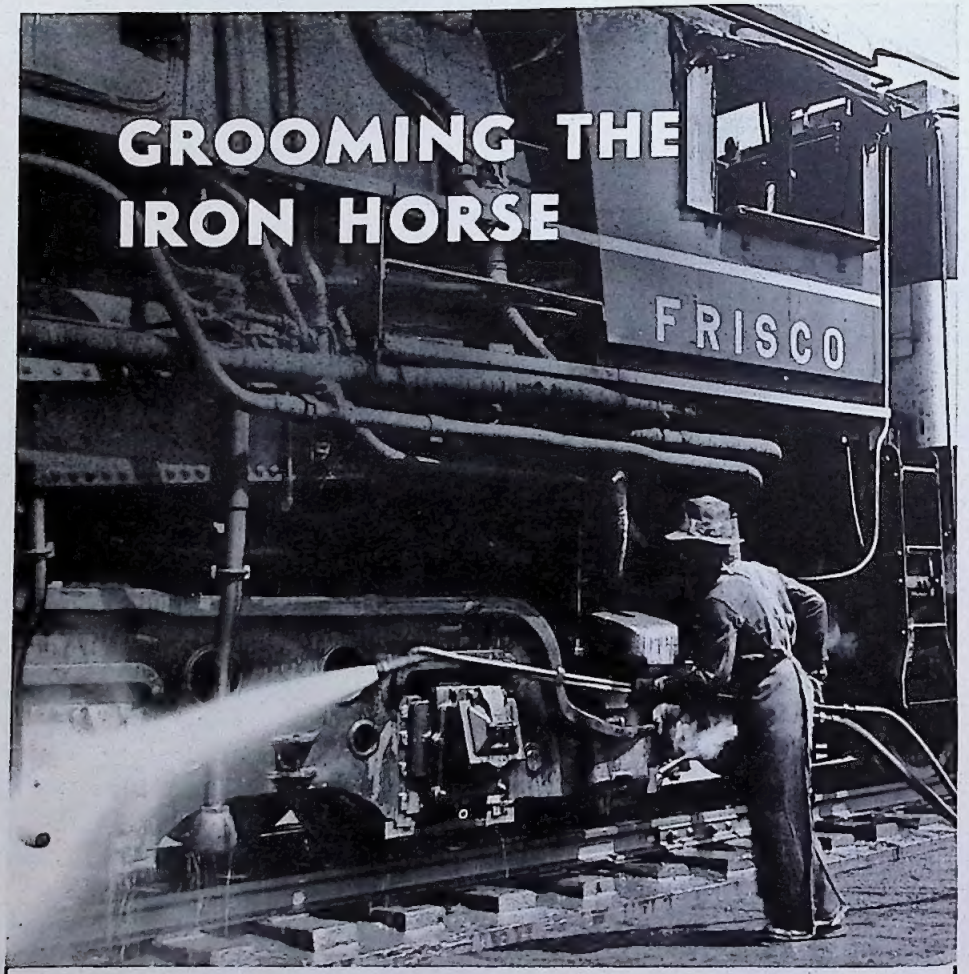
Special Railroad Photo Issue



One of Frisco's 4500 class passenger-freight locomotives being readied for a run.

The enormous capacity of this great railroad to serve a multitude of patrons . . . with varied needs . . . in a wide variety of ways . . . under an almost endless assortment of conditions . . . is largely dependent on the ceaseless skilled care and attention given all Frisco Lines equipment.

Sleek, speedy, streamlined Diesel-powered trains will soon replace these giants of the rails on the Meteor and Texas Special.

FRISCO LINES

ST. LOUIS-SAN FRANCISCO RY.

It's a Great Railroad

Trains

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Volume 5, Number 2

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"The railroads of today are able to render their splendid services because from the beginning to the present time they have never ceased building, improving and changing."—Charles Gilbert in "Through by Rail."

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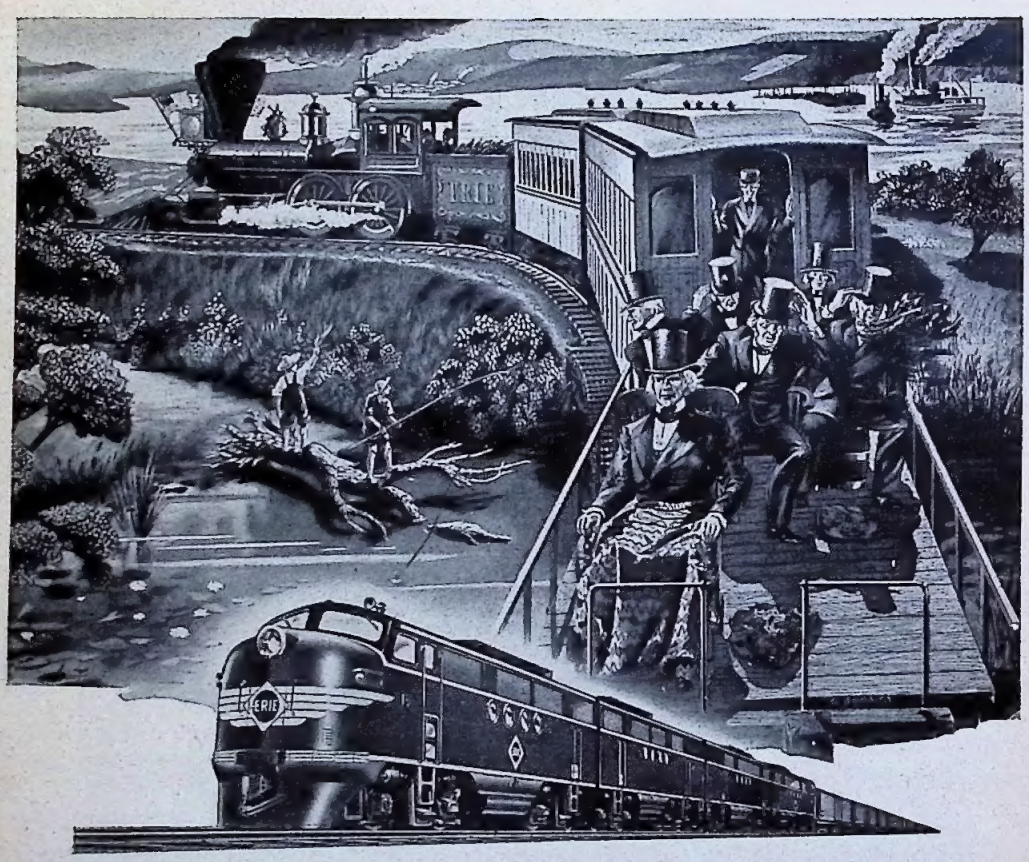


To celebrate the opening of the then longest rail line in America, the Erie Railroad arranged a now famous junket for May 14, 1851. Included among the guests who made the 427-mile trip were President Millard Fillmore, several members of his cabinet and Daniel Webster, who is pictured here as he elected to travel.

SAMPLE OF THE NEW AND BETTER

In his hair was the snow of 69 active years — but in the heart and mind of Daniel Webster was ever-youthful eagerness to sample new and better things.

So when the Erie Railroad celebrated the opening of the first "long" rail line, he prescribed his own accommodations. Other distinguished guests could ride in coaches if they preferred — Mr. Webster would take a rocking chair on an open flatcar, so as not to miss anything new and exciting.

Were he with us today, Daniel would still find new and better things along the lines of the Erie. Heavy grades that "bottlenecked" freight movements for a long time, have bowed down before General Motors Diesel locomotives — and long strings of freight cars now move with dependable on-time regularity without split-up between Chicago and Jersey City.

Here, as in the service of 83 other major lines and heavy industries, this modern motive power is dramatically heralding new and better things to come.

For their great power, their speed, their unmatched smoothness make one thing clear: *When whole lines become completely GM Dieselized, schedules can be clipped, costs still more reduced—and all your travels blessed with fresh new comfort and ease.*

ADD SECURITY
TO VICTORY
BUY MORE
VICTORY BONDS

GM
GENERAL MOTORS
DIESEL
POWER

LOCOMOTIVES ..... ELECTRO-MOTIVE DIVISION, La Grange, Ill.

SINGLE ENGINES ... Up to 200 H.P.
MULTIPLE UNITS ... Up to 800 H.P. — DETROIT DIESEL ENGINE DIVISION, Detroit 23, Mich.

ENGINES ..... 150 to 2000 H.P. .... CLEVELAND DIESEL ENGINE DIVISION, Cleveland 11, Ohio

Fastest Train Title Goes to C&NW

With the addition of a stop at Waukegan the Chicago & North Western's 9:05 a. m. *City of Milwaukee* "400" from Milwaukee to Chicago now makes the 15.66 miles from Kenosha to Waukegan in 11 minutes, for an average of 85.4 miles per hour, thus becoming the world's fastest scheduled train. The record was formerly held by the *Morning Zephyr* of the Burlington which made the 55 miles between East Dubuque and Prairie Du Chien in 39 minutes for an average of 84.6 miles an hour.

The North Western's record is the more remarkable because it is made in such a short run. The train reaches a maximum speed of a little over 100 miles an hour, but it takes somewhat more than three miles out of Kenosha to get up to speed and the shutoff begins about a mile from Waukegan. Acceleration is helped a little by the fact that Waukegan station is 40 feet lower than Kenosha, and while the first mile out of Kenosha is very slightly upgrade, the loss in elevation follows immediately and before the train is up to full speed. The rest of the run is along the lake shore flats.

Examination of the train sheets shows that No. 156 has been making the difficult time day after day. The train is pulled by a 2000 horsepower Electro-Motive Diesel and is made up of six light weight Pullman-built cars totaling 350 tons behind the locomotive. The line is double track, automatic block signaled, and has no grade crossings of other than secondary roads. Curvature is very slight and the lake front flat offers a natural speedway.

Pennsylvania Orders 10 Passenger Diesels

The Pennsylvania Railroad has placed an order with Electro-Motive for 10 Diesel-electric road passenger locomotives. They will be placed in service on certain runs outside the eastern electrified territory. Each locomotive will be four units of 1500 horsepower each, similar in appearance to the EMC freight Diesels, but with 6000 total horsepower, the same as the three-unit passenger Diesels in service on the *City of San Francisco* and *City of Los Angeles*.

The Pennsylvania has recently invested heavily in new steam locomotives for fast passenger service on its non-electrified lines, and until the recent tests of a 4000 horsepower Diesel [last month's TRAINS] has not used Diesel power in road service. Rumors have been strong that the road will extend its eastern electrification across the Allegheny summit into Pittsburgh, and if such plans are in existence they would of course affect motive power planning, for this section with its 2.2 per cent grade is the system's toughest.

The Pennsylvania's four cylinder class T-1 4-4-4-4 steam locomotive, of which two have been in service for three years and 50 are under construction, has proved remarkably successful and has had motive power men talking by its feat of outperforming a 5400 horsepower Diesel at all speeds over 26 miles an hour. The Pennsylvania is very thorough in its tests of locomotive performance, and with the new T-1's, the turbine locomotive, the duplex turbine which is being developed, and now the Diesels interesting developments can be expected.

C&O-Nickel Plate Merger Off

The Chesapeake & Ohio has withdrawn its offer for exchange of stocks so as to merge the Nickel Plate and Wheeling & Lake Erie into C&O. Formidable opposition of a large group of Nickel Plate preferred stockholders caused the plans to be dropped. This will not interfere with the merger of C&O and Pere Marquette, but it does leave the status of Wheeling & Lake Erie uncertain because Nickel Plate, which now owns a one third interest in the W&LE, has indicated a desire to purchase the C&O's holdings of Wheeling.

Pullman Picks Railroad Group as Buyer; Sale Up to Court

The future of the Pullman sleeping car operating business is up to the United States District Court in Philadelphia. Four offers have been made to buy the business, which the court has ordered divorced in ownership from the Pullman-Standard Car Manufacturing Company and the various bids will be considered on December 10.

Three of the bids have come from private concerns, and the fourth is from a group of 27 railroads who operate 81 per cent of the sleeping car runs in the country. These railroads proposed that they buy individually the newer cars used in regularly assigned service and create a pool of older cars on which all roads would be able to draw for seasonal and special movements.

The railroad proposal to the court said, "It is primarily the duty of the railroads to provide sleeping car service for the comfort and convenience of the traveling public, and no other person has right, opportunity or obligation to furnish such cars or service except under contract with railroad companies."

Carl E. Newton, president of the Chesapeake & Ohio, told the court that the railroad sponsored proposal for the railroads to acquire Pullman is "detrimental to the interests of the smaller passenger-carrying roads" of which, he admitted, the C&O is one.

The other three bids have been made by Otis & Co., Cleveland, with which Robert Young, chairman of the Chesapeake & Ohio, is affiliated; Glore, Forgan & Co., Chicago, and Standard Steel Spring Co., Coraopolis, Pa. All are for approximately $75 million, but differ in some details.

Pullman Company, asked by the court which bid it preferred, named the railroad deal. Pullman said all differences as to price and details between itself and the roads had been eliminated and an acceptance letter had been sent by the roads to David A. Crawford, president of Pullman. Attorneys for the railroads and for Pullman contended that the court had power only to approve or disapprove this sale, but the judge raised the

Rio Grande 75th Anniversary

1870 Civil War Reconstruction . . . Opening of the West . . . Incorporation of the Denver & Rio Grande, originally projected to Mexico City . . . Called the "Baby Road" because its tracks were narrow gauge, 3' wide instead of the standard 4'8½".

1883 First thru Rio Grande train between Denver, Colorado Springs, Pueblo, Grand Junction, Salt Lake City and Ogden . . . In the wake of fabulous precious metal discoveries a network of rails followed.

1890 The Royal Gorge Route—Denver, Pueblo, Salt Lake City, Ogden—became standard gauge . . . Fame of the Rio Grande as *"Scenic Line of the World"* universally recognized.

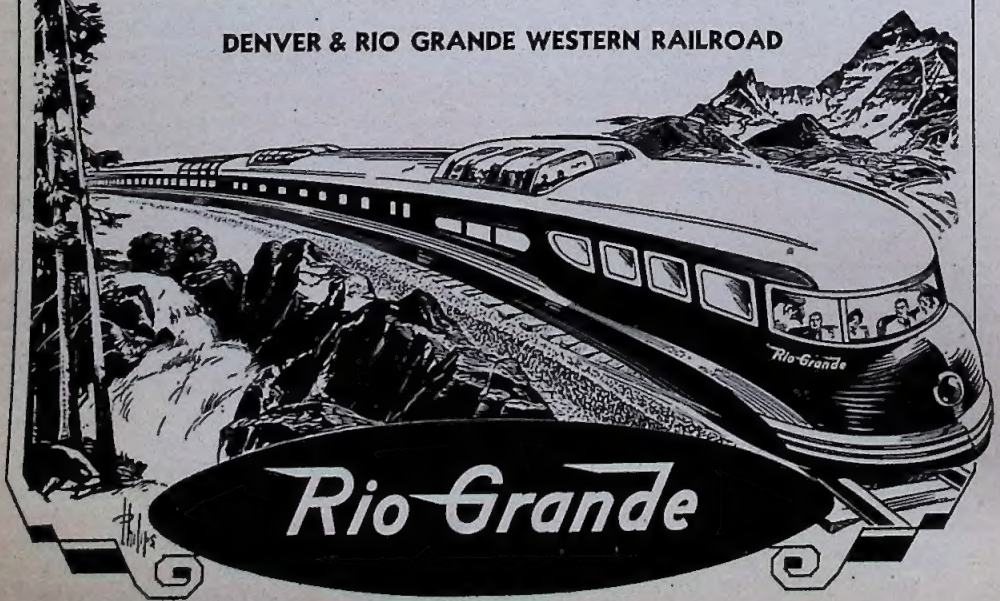
1928 Pioneer dreams came true with completion of the Moffat Tunnel, 6.2 mile bore under James Peak.

1934 Moffat Tunnel Route, via Dotsero Cutoff, opened another direct central transcontinental route vital to Chicago gateway, just as Royal Gorge Route thru Pueblo is to St. Louis gateway.

1941 Pearl Harbor . . . war in the Pacific . . . war in Europe . . . railroads became nation's lifeline. Rio Grande, prepared for expansion by vast pre-war improvements, plays vital role.

1945 VE Day . . . VJ Day . . . 75 years of Rio Grande service crowned by full-scale participation in Victory . . . ready for years of continuing usefulness . . . soon to present for approval of American travelers a new streamlined transcontinental train featuring new-style accommodations and the ultra-modern Vista Dome cars.

DENVER & RIO GRANDE WESTERN RAILROAD



question of whether the interest of the consumer is not also involved and heard testimony on the other three bids. Whether the court will try to force a sale other than to the railroad group, or whether it has the power to do so, is not known. The reopening of the proceedings on December 10 will be watched with much interest. No doubt if the railroad-Pullman deal is not approved the decision will be appealed on the grounds that Pullman, the parent company, was only required to sell the sleeping car business, and not to sell to a particular buyer prescribed by the court.

The Young group has been particularly agressive in pushing its proposal to buy Pullman and embark on a major program of building 7000 new cars costing half a billion dollars and setting up a merchandising organization to sell sleeping car transportation. Young told the court he had become alarmed over the lack of plans for the future of the Pullman service and that C&O's plans for the finest passenger service in the world had been brought to a complete standstill as far as overnight service was concerned.

Young said, "The keynote of our service will be to make every phase of travel, from door to door, a pleasure to be anticipated." He also charged that Pullman cars cost three to four times as much a pound to manufacture as automobiles and asserted, "The Pullman situation must not be allowed to deteriorate into the present box car situation, where every railroad orders its box cars accompanied by a long list of special specifications from paint to doors and ends, even roofs, catering to special suppliers, special shippers, and special friends."

Whether Young's bid is successful or not, his audacity in speaking his mind may well have some effect in impressing upon the new operators of Pullman, whoever they may be, the possibilities in postwar operation of railroad sleeping cars.

Vista Dome Cars for B&O

The Baltimore & Ohio plans to use Vista Dome cars on its route through the Potomac Valley as soon as they can be obtained, and will make further installations on other routes within the next two years. A new type 24-roomette sleeper with easily adjusted beds is being planned to replace the standard 12-section cars now in use. Luxury coaches are also part of the B & O's postwar plans, and dining car improvements include space for dancing and accomodations for 48 table guests as well as 10 cocktail lounge patrons.

Early next year the running time between Chicago and Washington and Baltimore will be cut several hours with fast daylight coach service.

Rio Grande Opens Tunnel

The new Tennessee Pass tunnel of the Rio Grande is now in use. It passes under the Continental Divide and is on the Royal Gorge route 116 miles west of the Gorge. The old Tennessee Pass tunnel was built in 1890 when the line was converted from narrow gauge, and although only 200 feet below the summit it eliminated a long ladder track over the top and reduced the ruling grade from four per cent to three per cent. The old tunnel will be relined and continued in use, providing double track over the summit. The new tunnel, which parallels it, has larger clearances, and will allow higher and wider loads.

About 50 trains daily move over this route, which has important eastern connections with five roads at Pueblo and western connections with Western Pacific and Union Pacific at Salt Lake City. Before the Moffat Tunnel route was completed by the Dotsero Cutoff in 1934 traffic from the Denver gateway also moved via the Royal Gorge route.

The California Zephyr

The new Chicago-San Francisco streamliner which will replace the *Exposition Flyer* over the Burlington-Rio Grande-Western Pacific [October 1945 TRAINS] will be called the *California Zephyr*. Orders for six sets of equipment, each consisting of 10 Budd-built cars and a Diesel locomotive, have been placed jointly by the three railroads.

Operating and traffic officials of the roads have been conferring on plans for the new trains, which will go in operation in the late summer of 1946. Both sleeping cars and coaches will be equipped with Vista Domes and the schedule will provide for daylight operation through the 116-mile Feather River Canyon of the Western Pacific and over the Moffat route of the Rio Grande through the Colorado Rockies. This will be the first time that Denver will be served by a modern transcontinental streamliner and the first time that Salt Lake City will have a streamliner direct to San Francisco. Investment in new cars and locomotives will run about $10,500,000.

Virginian Railway Orders Largest Electric Locomotives

The Virginian Railway has ordered from General Electric four 8000 horsepower electric locomotives which will be the most powerful in the United States. They will be used for heavy coal haulage operations over the Allegheny Mountains between Mullens, W. Va., and Roanoke, Va. The new electrics will not only be more powerful than any previous locomotives, but will carry more weight on drivers, slightly over one million pounds.

The 8000 maximum horsepower rating is 800 more than any existing U. S. locomotive. The continuous horsepower rating is 6800. Starting tractive effort will be 260,000 pounds at 15.75 miles an hour. The present most powerful electric has a starting tractive effort of some 50,000 pounds less. With this pulling power the locomotive will be able to negotiate heavy grades at moderate speeds with 10,000-ton coal trains, while with lighter freight trains speeds up to 50 miles an hour will be possible.

The Virginian, which was built in the early years of this century as an extremely efficient one-purpose coal hauler between the Appalachian fields and the seacoast, is electrified over its mountain section with 11,000 volt 25 cycle A. C. The new locomotives will be powered with one D.C. traction motor geared to each of the 16 driving axles under the two-cab unit, and the current will be converted by two 4000 horsepower motor generator units mounted within the cab.

New NP Bozeman Tunnel

The Northern Pacific is now operating its trains through a new 8000-foot tunnel under Bozeman Mountain on the main transcontinental line in Central Montana. The tunnel was completed at a cost of approximately $1,350,000 to give ample clear-

ance for NP's new steam locomotives, many of which were put in service to handle war traffic. The first train through the new bore was an extra freight bound for the West Coast. The last train through the old tunnel was the second section of the westbound *North Coast Limited*.

The new bore replaces a tunnel which was put in service in January, 1884, only five months after opening of the Northern Pacific's transcontinental line. Pending completion of the first tunnel, trains operated over the mountain on a switchback, restored to temporary use when a fire prevented operation through the tunnel.

Odds and Ends

It seemed like old times to see the *Twentieth Century* in two sections recently, and both streamlined. The first train had 16 cars powered by Diesel while the second had 13 cars with a Hudson. . . . The Pennsylvania has made the second section of the *Liberty Limited* into an all-coach streamliner between Chicago and Washington. Equipment is indentical to the *Trail Blazer*. . . . The Rio Grande has converted the second section of the *Exposition Flyer* into a new faster train, the *Prospector*, between Denver and Salt Lake City. No through cars are carried. Union Pacific promptly cut the running time of its *Pony Express* to meet the challenge. . . . The Mount Washington cog railway, which has been closed since Pearl Harbor, is getting ready for a big reopening next summer.

There seems little hope that sleepers under 450 miles will be restored before next March at the earliest. . . The Burlington is operating two experimental trains between Chicago and Ottumwa, on fast schedules. The westbound train follows the *Denver Zephyr* in early evening, while the eastbound train leaves Ottumwa at 7 a. m. and arrives in Chicago at noon. Numbered X-1 and X-40 (No. 1 is the *Zephyr* and No. 40 the *Exposition Flyer*) the trains are carded as "operates until June 30, 1946," but if earnings are satisfactory they will be continued. . . Boston & Maine and Maine Central have jointly ordered 24 new coaches from Pullman-Standard.

The Frisco has established its postwar schedules for *Flash Freight* between St. Louis and Tulsa and Oklahoma points. The rigid schedule provides 7 p. m. departure from St. Louis and 8:30 a. m. arrival at Tulsa, 2½ hours faster than prewar service. . . . . The Milwaukee Road has instructed dining car stewards to re-establish the complimentary demi-tasse at breakfast which was a popular feature before the war but a wartime casualty. The instructions do not provide, however, that patrons who are kept awake by coffee must drink the demi-tasse. . . . As the Vista Dome comes in for passenger cars the cupola is going out of use on cabooses. Latest convert to bay window cabooses is Southern Pacific, which has ordered 50 cars of this type.

A Sound Basis for National Transport Policy

The only sound basis for government policy toward common carrier transportation is this:

> The entire cost of each form of transportation, including capital charges, must be paid by the users of that form of transportation in the form of rates.

If this policy is followed, shippers will automatically route their traffic by the method of transport which is the most economical and efficient, all circumstances considered, and our total national transport costs will be the lowest in proportion to value received.

Only the shipper can really choose which method of transport is best for his particular purpose. Obviously some methods of transport are going to cost more than others, and the shipper's choice will be distorted if the rates for these various methods of transport are not a true reflection of cost.

The government cannot know which methods of transport are best for the country, because each method is best in some particular circumstances. But the shipper does know, in each individual case. Leave it up to him and the development of transport will follow reasonable economic lines. But now the shipper can't know the true relative costs of the various means of shipping. He only knows what he's paying out of his pocket, not what the taxpayers are paying in government aid.

The railroads are the only form of transport paying their own way completely. When you travel by rail the fare covers the entire cost, plus taxes. But your airline ticket covers only the cost of operating the plane, and not the greater portion of airport and airway costs which are paid by the taxpayers at large, including the railroads. Same goes for inland waterways. In most cases the government would be cash ahead to pay regular rates on the railroads and ship waterway traffic that way rather than maintain the waterways. Trucks and buses are the least offenders, although their gas and vehicle taxes still do not fully pay their share of street and highway construction and maintenance.

The economy of rail transport is so great that it has been able to keep a major share of the nation's freight and passenger business in spite of these subsidies to competitors. The danger of subsidies is not that they will put the railroads out of business, for it is inconceivable that our country could ever remain a going concern without railroads. But the danger is that by draining off marginal high rated traffic the subsidized competitors leave the railroads with less earnings for the improvements which we as the traveling and shipping public need and which the railroads must finance out of the money they collect for fares and rates. From an even broader standpoint of public welfare, the danger is that we, the people, are paying more than we should in total distribution costs simply because our government, by paying part of the bill, encourages individual shippers to route shipments by methods of transport that are more expensive than necessary.

What to do about it? Write or phone your national, state and local representatives insisting that any government investment in transportation facilities be on a self-liquidating basis, that fees be charged which fully cover the cost and gradually repay the investment. Only then will the old faithful law of supply and demand again channel our transport along the lines of greatest efficiency, and only then will we get the highest standard of living which modern technology makes possible.

A. C. Kalmbach.

LOOKING UP THE TRACKS

To Demobilization To you returning Veterans we feel the same urgent responsibility for getting you Home as we did for getting you to the Front. There are inspiration and satisfaction in the happy ending of a job that only yesterday had nothing but the grimmest aspects. Count on us to keep the supply lines open and to serve you faithfully.

To Reconversion To Industry we say it is our purpose to gear our operations with yours, in order to smooth and shorten the route to Reconversion and Peacetime Commerce. We will provide the type of transportation required by manufacturers for the prompt delivery for needed raw material and for the economic distribution of finished goods.

To Modernization To Travelers, as soon as demobilization permits, we pledge a full and quick transition of passenger service—tuned to the times and to the traditions of The Milwaukee Road . . . To old friends, who at times relinquished their privilege to travel in their accustomed style, we convey our gratitude for their patience and understanding . . . Good days of comfort and hospitality for all Milwaukee Road patrons are ahead.

The Milwaukee Road looks forward to being unceasingly busy in performing these jobs. A long-term program of development and modernization of plant and facilities is being carried forward. Later plans, now in the making, will be progressively unfolded.

Look up the track! The signals say "All clear!" Let's go!

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

THE MILWAUKEE ROAD

Let's Go to Quebec

Ride Canadian Pacific's Frontenac over a heavily traveled line of railroad into a city of Old World charm

BY ROY G. CLARK

We're in the big Windsor Station at Montreal and the time is 9:10 a.m. Canadian Pacific's *Frontenac* is almost ready to depart for Quebec City, 178 miles down the great St. Lawrence River.

Many Americans have come to think of the Canadian Pacific (CPR to every Canadian, whether railroader or not) as primarily a transcontinental line, and so much of our interest has been centered on the story of its epic struggle westward over the great plains and the Rockies that we frequently forget the tremendous job it does in Eastern Canada. This is the most densely populated section of the Dominion and railroad freight and passenger traffic compares very favorably with that of our busier lines in the States.

So, let's take a ride on the *Frontenac* this morning, because this fine train is typical of the service afforded the Eastern provinces by this really great railroad system. And the *Frontenac* will carry us to Quebec City, probably the most interesting city in North America, not excepting either New Orleans or Mexico City.

It's 9:15 now and the skipper of the *Frontenac* is giving the high sign. Our semi-streamlined Hudson locomotive, of the 2800 series, picks up the train of 18 cars and we really walk out of the trainshed. It's a Saturday morning in July and we have a lot of extra coaches full of weekenders going to nearby resorts on the traditional French and British holiday. Our consist is made up of one mail and one baggage car, three CPR parlor cars, one dining car and 12 day coaches. The coaches are placed on the rear in order that some of them may be dropped off enroute as they are emptied.

Everyone has a seat on the train. The parlor car space is, of course, reserved in advance, while the day coaches are loaded from the front car toward the rear, each car rearward being unlocked and filled with passengers as it becomes necessary. Although we pull out with 12 coaches, comfortably filled, there are still two cars left on the rear of the trainshed track.

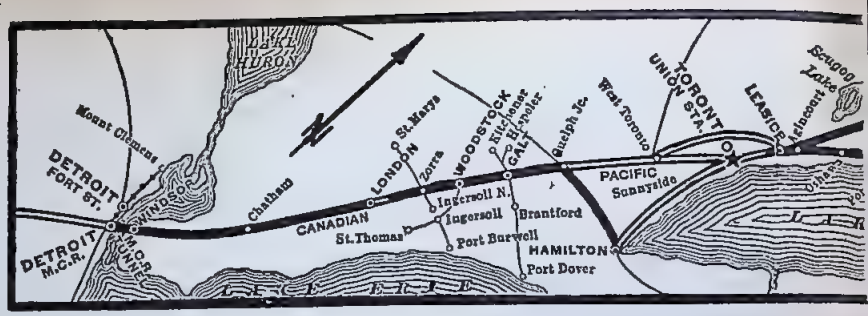
Had they been required, they would have been available.

Such comfortable travel conditions in these times seems almost unbelievable here in the States, where the shortage of equipment makes it impossible to merely add more cars if the passengers keep on coming, as they invariably do these days. The CPR has plenty of coaches available because troop movements have been much smaller, even in relation to the smaller population.

Now that we've looked the train over, let's see where we're going. Even though our train will proceed northeast to Quebec City, the first 4.7 miles to Montreal West [October 1945 TRAINS] are southwest on the line to Toronto. Montreal West is a great transfer point for passengers, because here all through traffic in and out of Montreal converges, whether coming

Here is the westbound Frontenac leaving Quebec on its 178-mile run to Montreal. On the front end is one of Canadian Pacific's semi-streamlined Hudsons of the 2800 series which some critics believe are the finest examples of modernizing steam locomotive appearance while still retaining the essential characteristics of the locomotive. Orders are being picked up on the fly.

J. R. MacLead, 70 St. Paul St., Quebec, Ont.



A main trunk of Canadian Pacific reaches east from the border at Detroit to Montreal and Quebec. The transcontinental trains are routed west from Montreal via Ottawa.

from or going to Vancouver, Chicago, Detroit, Toronto, New York, Boston, Ottawa or Quebec City. It's a great convenience, in case your inbound Boston train should be a bit late and you want to catch the train to Ottawa, let's say. The time it takes your inbound Boston train to get into the Windsor Station plus the time it takes your outbound Ottawa train to come out may be just enough for you to make the connection, if you change at Montreal West. Wise passengers know this and take advantage of the situation thousands of times a year.

At Montreal West our train swings to the right on the double track belt line, leaving the Montreal-Toronto line. At Park Avenue we join the double track line from downtown Place Viger Station and we run along this line to Bordeaux. Frankly, we haven't made much time yet. It has taken us 41 minutes to cover the 15.5 miles from Windsor Station, and we've practically circled the downtown section. From here on we have to start highballing in order to make the remaining 162.8 miles in three hours and 39 minutes, with five more station stops, plus a 10-minute service stop at Trois Riveires.

As we swing off northward on the heavy duty single track line to Quebec City our big Hudson really starts to work, and we can soon see why these CPR machines are rated so highly. They have what it takes to handle heavy passenger trains over fairly rugged territory with smoothness and speed.

Now that we're under way, let's see what sort of country we're traveling through. Contrary to many preconceived ideas about this part of Canada, it is far from wild and rough. Everything is under cultivation, with stone and wire fences systematically marking off each sector of land about every 600 feet. Just at this moment we are passing through hay country and the fields are white with Quebec daisies as far as the eye can see. There are many truck gardens, many well kept farm houses, and we realize that here, indeed, is a fertile and prosperous land. Every few miles some blue water lake flashes by, and we see dozens of summer cottages fringing the shores, just as we find them in the lake regions of Wisconsin and Minnesota.

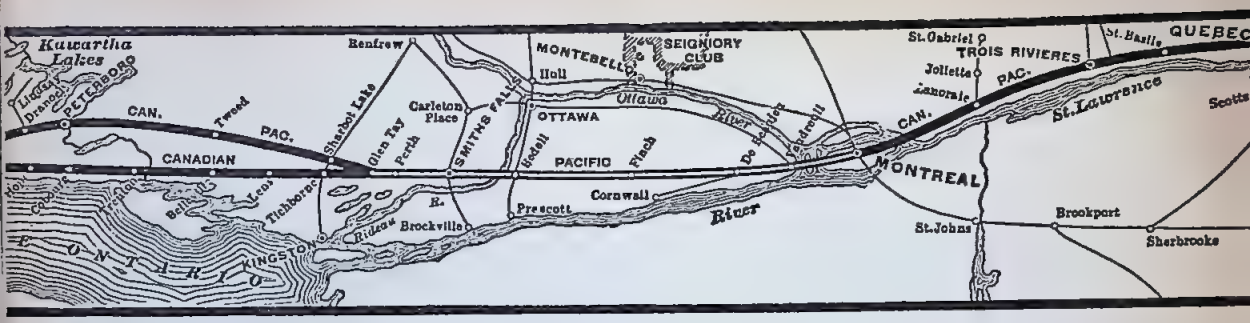
But here comes the train conductor, accompanied by the CPR sleeping car conductor, the counterpart of our Pullman men in the States. Both men are French Canadians and both use the French language in their ordinary conversation. However, they are adept at spotting Englishmen or Americans, and so they greet us in flawless English. When discussing our tickets with each other, however, they revert to their accustomed French.

In Quebec Province many railroad men must be bilingual. The public timetables are printed in both languages and the train crews announce the stations first in French, then in English. Many company signs are duplicated in both languages, although on some more remote branch lines, where the local population is composed entirely of French, only that language is employed.

Our parlor car has no porter and the CPR sleeping car conductor acts in his stead, brushing off such passengers as may want it, and accepting the customary tips with the greatest of dignity and with no loss of self-respect.

Now we're pulling into Lanoraie, where a branch line leads off to Jolliette, Lourdes, and St. Gabriel. A lot of the holiday travelers transfer to the branch line train that is waiting, a really respectable outfit, consisting of a combination baggage and mail car and four coaches, with a trim little Pacific up in front. This train makes three round trips over this 27-mile line on weekdays and carries a lot of passengers.

At 11:40 we pull into Trois Rivieres and we get out to stretch our legs during the 10-minute service stop during which we drop a few coaches, now empty. We look over the branch line train on the adjacent track, scheduled to leave in five minutes for Shawinigan Falls and Grand Mere. The motive power is a neat Ten-



Wheeler, with a consist of three freight cars, a combination baggage and mail car and three coaches. This, too, is a busy little branch line and this train makes three round trips each weekday, with an extra run on Saturdays. No grass-choked streaks of rust are these CPR branch lines in Quebec Province.

Now that we've left Trois Rivieres, let's have lunch in the dining car. An amusing incident is the spectacle of a colored waiter arguing and gesturing in French with the steward, with all the Gallic ferver usually associated with a Frenchman. It's probably some trivial matter, but the two of them make it appear to be the decision of the century.

Promptly at 1:35 p.m. we pull into the Palais Station in Quebec City, having covered the 162.8 miles from Bordeaux at an average speed of better than 45 miles an hour; not bad at all, considering the rather rough country in spots, the number of stops and the train tonnage.

As we walk through the waiting room we realize that we are now entering a genuinely foreign land, far removed from cosmopolitan Toronto and Montreal, which are really like Buffalo, Cleveland or any other large sized American city. One glance tells us that Quebec City actually is different in every way. It is the meeting place—the "big town"—for the people of the real North country, whose habits and customs are those of old France, unchanged over hundreds of years.

Sitting over there is a family from the Gaspe Peninsula, apparently saying good-bye to a son and brother who is in the priesthood, a piquant and quaint figure in his shovel hat and flowing cassock. Back in the States we might be a bit amused at his appearance, but here in Quebec he fits perfectly into the picture and an aura of dignity definitely surrounds him.

On the next seat are three trappers from the Saguenay country, and they apparently have been in town to outfit themselves for the next season. The gestures and the roguish twinkle in the eye of the most talkative member suggests that they have been having quite a time for themselves while in the "big town." Back of them a group of gold miners from the fabulous Rouyn area is eavesdropping, and enjoying it immensely.

All through the waiting room is the continuous hum of a foreign tongue. So little English is spoken that a single word in that language instantly registers in our ears above the drone of the other talk.

Palais Station is used by the CPR, by its affiliate the Quebec Central, and by the Canadian National. While the traffic is nothing like that put through Montreal's Windsor Station, nevertheless there are a sizable number of trains in proportion to Quebec's population of 150,000 as compared with Montreal's over a million people.

And there's real romance in every train trip northward out of the Palais Station, if you're willing to take a bit less than de luxe service. The Canadian National trip to Chicoutimi, on the famed Sageunay River, is one that a traveler from the States will never forget. And if you want to ride through exactly the sort of North woods brush country that you've read about, take the Canadian National sleeper over to Senneterre, the gateway to the Rouyn gold mining country.

From the Palais Station the adventurous traveler can embark on what is, without doubt, the slowest passenger trip on the whole North American continent, not excepting even that ambling journey from Veracruz to Tapachula in Mexico. The Canadian National line from Quebec City to Nakina, Ont., stretches westward straight as a string for 849 miles. It will take you from 8:10 Monday night until 4:50 Thursday afternoon to cover this mileage by passenger train, with two overnight stops enroute. And you'd best make the trip before the end of September, because winter comes early along this line.

The Quebec Central gives service to the southern counties of the Province via the mag-

nificent bridge over the St. Lawrence a few miles upstream from the city—the bridge whose magnificence was built, it will be remembered, upon the memories of many workmen who lost their lives when it collapsed twice during construction. The QC has no through passenger service to either Boston or New York, the journey entailing a midnight change at Newport, Vt., that pretty little town sitting at the foot of Memphremagog Lake, extending from the U.S.A. up into Canada, and a veritable highway for bootleggers in the Prohibition era. The QC does, however, constitute a very valuable freight traffic link between New England and upper Canada, by-passing the congested Montreal terminals.

But let's take a cab up to the CPR's magnificent Chateau Frontenac, a name that is a byword in fine hotels from Cairo to London and New York.

Our cab grinds up the narrow and steep streets to the commanding bluff over the St. Lawrence from which the Frontenac arrogantly stares over the town and the surrounding countryside. It swings through a high gate into an enclosed carriage yard that has such a strong old world flavor that we instinctively look for the chickens, the dogs and the peasants that greet us in similar courtyards in provinical France.

But no chickens, dogs nor peasants greet us here, by any means, for we are entering what is considered to be one of the 10 finest hotels in the world. We sense the distinguished atmosphere in the firm click with which the doorman closes our cab door but the human, friendly greeting smiled at us by the French Canadian desk clerk immediately dispels any misgivings we may have had about the pretentiousness of the hotel.

Our room faces the broad esplanade at the top of the bluff, where all Quebec promenades in the evening, summer and winter. Directly below us are the narrow, winding streets of the "old town," with the majestic St. Lawrence just beyond. Its broad expanse of water makes it appear to be a tidewater bay instead of a river, and that's what it is to a certain extent, for the ocean tides rise and fall here, even though we are still hundreds of miles from the river's mouth.

The view is breath-taking and, for lack of better words, we fall back upon that old cliche, "words can't describe it." Nor can our words tell of the tremendous lift in spirit that we get from the combination of the great river, the commanding view and the old country vista laid at our feet. It is something like looking through the old-fashioned stereoscope, only the three dimensioned view laid out before us here is real.

Even though it is July we note that extra blankets are piled at the foot of our bed. Later on we'll be thankful for those blankets, and we'll close down our windows quite a bit, to tone down the very cool air currents that sweep down the St. Lawrence from up North.

We have a fine dinner in one of the dining rooms overlooking the river and then we decide to take a walk. We promenade along the esplanade with all of the rest of Quebec, but we are anxious to get down to the "old town" that looks like a story book village from up here. An inclined passenger elevator takes us there in 45 seconds, straight down the side of the bluff at a 45 degree angle. In those 45 seconds we travel from ultramodern 20th cen-

The Frontenac leaving Windsor Station, Montreal, for Quebec.

tury luxury to the more primitive and peaceful life that was enjoyed over 200 years ago. When we step out of the elevator we step straight into France of the colonial days.

Here are narrow streets, some too steep and winding to permit vehicular traffic. Here are high-gabled four-storied buildings, with sharp and steep roofs and with overhanging balconies. Everywhere we hear the French language, read French signs, stumble over rough French cobblestones, savor strange and exotic foreign odors.

On one street corner we spy an antique, ornamental gas light, looking like something from an illustration in a Victor Hugo novel. We expect to see a figure in a muffled cape, a plumed hat and a blunderbuss gun steal around the next corner, pursued by a Royalist or a Huguenot, as the case may be. A dullard, indeed, is he who can't muster up a romantic illusion in such a setting.

But nothing like that happens. Instead, we decide to walk back to the Frontenac, and in five minutes we are hopelessly lost in a labyrinth of twisting, intersecting streets. We stop several people and ask them the way. All of them know, all of them are affable and polite, but none of them succeed in getting the right idea over to us. So we keep on walking, taking the streets of easiest resistance and avoiding those that seem to promise a stiff climb. Eventually, we find that we have skirted the bluff and have arrived back at the Palais Station. Tired and footsore, we take another cab, grind up the roof-like streets to the hotel, pile on the blankets and go to bed.

Perhaps we've gotten away a bit from the CPR here in our story, but that's so easy to do when talking about old Quebec. Anyway Quebec City does mean CPR in many ways, especially when one considers the railroad's towering Chateau Frontenac, dominating the whole town from whatever angle you see it.

But all good things must pass, so let's board the southbound *Frontenac* this afternoon, after a late breakfast at the hotel. As our train winds around the hill at Cadorna, where we seize a last memorable glimpse of the Chateau Frontenac, we promise ourselves to come back sometime for a more extended stay.

H. W. Pontin, Railroad Photographic Club, 47 Royal St., Boston, Mass.

The Locomotive Fireman

There's a lot more to firing a locomotive than just shoveling the coal

BY G. W. O'CONNOR

It has been said that at some time in the life of every boy there is a period—long or short—when he feels that the only life worth living is that of the man who sits with his hand on the throttle and his eye on the gleaming rails ahead. Some of us never get over this feeling, and the locomotive engineer remains, and always will remain, the hero of the railroad. We are proud to know him and are perhaps even a little bit envious of him. We like to learn as much as we can about his work.

Many have learned a lot about the engineer's work but few (other than those in the business) have learned much about the work of the fireman. Yet every engineer, when he started out in the engine service, had to begin as a "smoke agent." Perhaps the fireman is not so glamorous but his work is nevertheless very important and interesting.

Personally I have never had the pleasure of firing, or even riding on, a stoker-fired engine, so I shall confine myself mostly to describing the fireman's work on hand-fired engines.

Obviously, the first requirement for a fireman is that he must know how to fire. Anyone can shovel coal but not everyone can keep an engine hot. It requires a little knowledge and skill. I had a chat with a traveling engineer one day about instructing firemen and he told me that he preferred to have his student firemen come from working on a farm.

"Then," said he, "I can tell him to load the firebox like a hay wagon, around the edges first."

Particular attention is also paid to keeping the corners well filled and after that the coal is placed wherever the fire looks brightest. Some firemen bang the heel of the shovel on the door opening as they throw the coal in, which scatters the coal more evenly over the top of the fire instead of heaping it all in one place.

Modern power is equipped with air-operated fire doors. There is a little pedal below each door and when the fireman steps on it the door opens. It stays open as long as the pedal is held down and as soon as the fireman removes his foot from the pedal the door closes. Before the days of air-operated doors the fireman had to swing open the fire door by means of a chain strung between the handle of the door and the roof of the cab. After putting in his scoop of coal he had to swing the door shut.

The matter of closing the door between each scoop of coal is really very important, as a moment's reflection will show. If the door is left open great quantities of cold air will be drawn into the firebox, not only diminishing the heat from the fire but also (which may be even more important) striking the boiler and chilling it in certain spots, resulting in uneven contraction from the cold. Uneven contraction, in turn, causes leaks—perhaps around the tubes, perhaps elsewhere—but still leaks.

An example of this condition occurred on the transport *President Grant* in World War I when it sailed for France with an inexperienced crew of stokers who left the fire doors open much of the time. Soon the boilers were leaking so badly that it was thought the ship would have to return to Hoboken without completing the trip. Now, it so happened that a railway regiment, the 21st Engineers, containing many experienced railway firemen, was on board. Volunteers were called for to fire the ship's boilers, and the railway firemen took over. They knew enough to keep their doors closed as much as possible, and here is the interesting point: The leaks in the boilers not only got no worse but they even made up a little and the trip was successfully completed.

It can easily be seen that if open fire doors had such bad effects on a steamship's boilers, where the draft is comparatively mild, a locomotive boiler with its violent draft would suffer much worse. Keeping the doors closed, by the way, is one of the advantages of stoker-fired engines, as they do not have to open up for every scoop of coal.

Left, H. F. Harvey, 65 Olean St., Worcester, Mass.; right, Dick Cook, Lakewood, O.

Good and bad firing is evidenced at the stack. What the public calls "smoke" is usually almost all exhaust steam, but excessive smoke means wasted coal.

"Little and often" is a good motto to follow in the hand-firing of soft coal-burning engines, though the hard coal-burners do not require such frequent attention, just as we find it in our domestic furnaces. Of course, in any type of engine, the heavier the load the more fuel will be consumed.

A traveling engineer told me he had a young chap come to him for instruction one time and it was found that he was loading the fire much too heavily. On this particular road they had a system whereby a student would make a run, or perhaps several runs, with an engineer, and when the engineer felt that the student had progressed satisfactorily he would sign a card to that effect and the student would move on to another engineer. When three engineers had signed the card the student was qualified as a fireman.

This particular young man was just about sunk, as he had his heart set on becoming a fireman and two engineers had already turned him down. This was his last chance.

My friend told him about liking men from the farm and found that this chap had come from a farm. Perhaps this gave him a little confidence, but still he over-fired his engine so that it commenced to lose steam. The regular fireman raked over the fire and got it going again.

"Now some more?" asked the student, taking up the scoop again.

"No, take a rest," said my friend, and the student uneasily got up on the seat box. They started up a grade.

"Now shall I?"

The engineer waved him back on the seat.

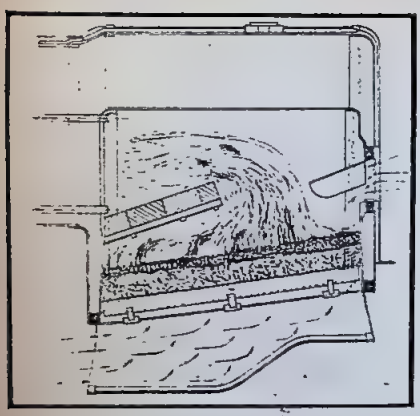
"No, you're too anxious," said he. "I'll tell you when."

Then, a little later, the steam began to drop.

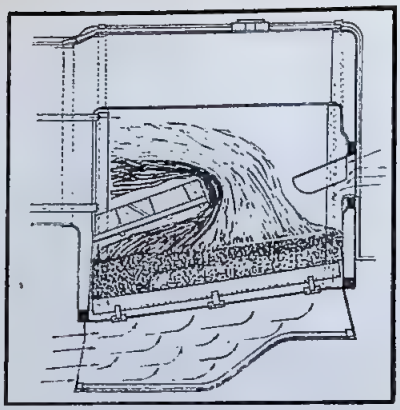
"Now, put on a little," said the engineer. The young chap went to work and was surprised when the engineer stopped him after only a few scoops of coal had been thrown on the fire. He watched the steam gauge, no doubt expecting to see it go way, way down, but instead it climbed! He learned something, and from then on he started to improve. By the end of the day he was firing without any further advice from the engineer. They had a freight train going 50 miles an hour and he was able to make the steam gauge climb when he wanted to.

A happy young man went home that night instead of the down-hearted one who had come to work in the morning. He had mastered the art of stoking an engine, he had one signature on his card and he now knew he could get the others. He was on his way to be a fireman.

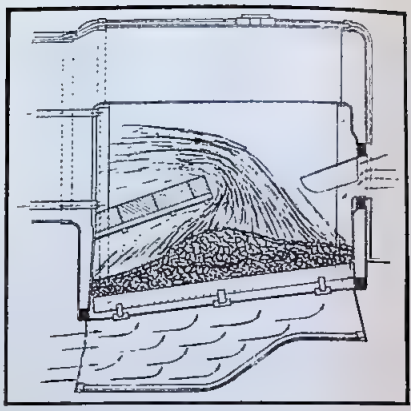
So you see the necessity for knowing not only where to place the coal but how much to put in at a time. Not too much and not too little. Some firemen like a heavier fire than others, believing that a thick bed of coals is not torn up so easily, especially if the engine slips in starting. They have a little more reserve or leeway. Others believe that a thin fire uses less coal, and I think they are right, as I notice that thinner fires are claimed as an advantage of certain grate bars. It may take a little more



A well built fire, with an even bed of hot coals covered with fresh coal.



Bad firing. The necessary hot bed of coals has been lost at the front end.



Too much coal in one place causes great loss of heat and much smoke.

skill to run a thin fire successfully but I believe with the advocates of a thin fire that it will save fuel.

Besides the actual stoking, an important duty usually left to the fireman, although really the engineer's responsibility, is the keeping up of the water level in the boiler. If the water is allowed to get too low there is great danger of burning the boiler, and in extreme cases the boiler may be so weakened by the burning that it will explode. On the other hand, the water level must not be allowed to get too high or wet steam will get into the cylinders and the engine will lose power, to say nothing about washing the oil out of the cylinders. Some years ago when I was working for the Bell Locomotive Works (makers of oil-burning steam dinkies), we had an engineer call in from a nearby job saying that his engine hardly had enough power to move itself let alone do any work. The answer was high water. He had allowed it to rise so high that he was getting nearly all water down to the cylinders.

The gauge glass is the ordinary means of reading the water level although it is not supposed to be used except as a checkup or super precaution. Enginemen are supposed to use the gauge cocks arranged at three different levels on the back of the boiler. The top one, when opened, should blow steam, the middle one a mixture of steam and water, and the bottom one water only. I say the gauge glass is not *supposed* to be used except as a checkup and that the gauge cocks are *supposed* to be the real water level indicators, but the fact is that the reverse is usually the actual case. The glass is the principal indicator used and the gauge cocks are the checkup.

I remember that it struck me as something odd the first time I heard an engineer say that there was "half a glass of water" in the boiler. Of course he meant that the gauge glass was half full but it sounded as though he meant that half a drinking glass of water was all the boiler had in it.

Anyone can look at a gauge glass and tell where the water level is but only the experienced can tell whether a gauge cock is blowing steam or water. To the uninitiated it all looks like steam but there are ways of telling which is which. Many enginemen rely solely on the sound. Water will make more of a roaring noise while steam will make a hissing sound. If the nozzle of the gauge cock can be seen it will be found that the white cloud from a jet of water will be white right up into the nozzle while if the jet is blowing steam there will be a space of half an inch or so before the white cloud forms, making it possible to see up into the nozzle while the steam is blowing.

Those who have had experience in operating a steam boiler, even a domestic steam furnace, know that the introduction of cold water will pull down the steam pressure, and the student fireman on a locomotive learns this very, very early in his career. The experienced fireman must therefore know not only *how* to put water into the boiler but *when* is the most advantageous time to do it. As to what is the proper water level, this varies very considerably with conditions, including the judgement of the engineer.

When putting water into the boiler it is often possible on local passenger runs to start the pump or injector whenever the throttle is closed so as to pull down the steam only when it is not being used by the engine. This may also prevent the safety valve from blowing and thus save fuel and firing effort. I have seen a skillful fireman on such a run keep his steam gauge at the same pressure throughout the trip, hardly varying it a pound either way.

On longer runs it is necessary to put water into the boiler while the engine is working steam—but then the rate at which it is pumped or injected can be cut down so as not to affect the steam pressure too much.

In addition to putting on the pump or injector whenever the throttle is closed the fireman usually opens the blower in order to keep the fire from slumping too much. The blower is a steam jet located in the smoke box and used for producing a forced draft when the engine is drifting and therefore not producing draft by means of the exhaust. The term "forced draft," by the way, is not technically correct in connection with a locomotive. When air is "sucked" through the fire and the boiler tubes, as in the locomotive, it is properly called an "induced draft." A forced draft forces the air from below the fire. The term "forced draft" is usually used in locomotive work in spite of not being technically correct.

A point often overlooked by those without experience is that an engine is usually fired left-handed, with the left hand held down near the scoop and the right hand out at the end of the handle. Most people naturally shovel right-handed but it is not hard to change. The fireman—in this country, at least—is on the left side of the engine and it is easier for him to stay there than to be crossing over and back all the time, as he would have to do whenever he started or finished putting in coal if he were to fire right-handed. It is better to have him on the left side in any case, as he can then take signals from the left side of the train and relay them on to the engineer.

In keeping up steam the engineer can often help or hinder the fireman. If he opens up and uses unnecessarily large amounts of steam in getting his train under way he will pull down the steam pressure, and the heavy exhaust may also tear up the fire, especially if the engine should slip. The proper way to run the engine is to use only as much steam as it will take without pulling the pressure down, except that, if the run is short, as mentioned earlier, the pressure may be pulled down in making a snappy get away and recovered later when the engine is not working steam. The proper use of the cutoff by the engineer will also greatly help the fireman, as the steam will then all be used to the best advantage.

In addition to knowing how to fire, the fireman must also know the Book of Rules, including the meanings of the hand and wayside signals. He must qualify the same as the engineer on the division where he is to work and must pass an examination as to his knowledge of the locations of all signals, switches, stations and other characteristics of the line.

On some roads the engineer and fireman call all the signal aspects to each other. On others they call only those which are not indicating clear with no restrictions. The usual way of calling them is, for example: "Yellow over green" or "double yellow," or perhaps "red."

As soon as possible the student fireman learns to stop his train in case the engineer should become incapacitated from any cause.

After the student fireman has qualified to work alone (that is, without having a qualified fireman with him) there will still be much to learn and also ample opportunity to acquire knowledge of the ways of the railroad as well as further details of the locomotive. A man aspiring to become an engineer will find the air brakes a most fascinating study. It is the subject for many a roundhouse discussion, as is also the Book of Rules—especially that part relating to train orders and operation in other than automatic signal territory.

Like many other jobs on the railroad, the firemens' runs are put up for bids and the award goes to the man with the most seniority. Until a man is old enough on the railroad to "own" a run he works on the extra list, covering any run where he is needed. Day or night, he is always on call.

The work is hard and the hours are often long and inconvenient. A new fireman should realize that on the railroad someone has to work nights and Sundays, not to mention Saturday afternoons and holidays. Aside from any special interest he may have in locomotives he can look forward, as a compensation for the disadvantages of his work, to the size of his pay check; and he has the additional satisfaction of knowing he is part of one of the most vital industries of our nation.

Railroad Photography Section

The work of several most capable railroad photographers, two full color reproductions from Kodachromes, and pictures of all the representative types of locomotives on the Milwaukee Road are included for your enjoyment in the following 23 pages of railroad pictures.

Along the Erie

Pictures by C. George Krumm are new to our pages. A friend of Donald W. Furler, whose Erie photos have often appeared in Trains, George also makes the Erie main line one of his favorite photographic subjects. Below, train No. 43, a summer train, pulls out of a curve near Hale's Eddy, N. Y., where the Erie leaves the banks of the Delaware River to hurdle Gulf Summit over to the Susquehanna. Above right, the Mountain Express with a variety of milk tank cars on the head end snakes through a reverse curve at Waldwick, N.J. Below, one of Erie's many suburban trains heads toward the ferries. Here it is gliding through Glen Rock, N. J.

Vigil at Ophir on Lizard Head

Four pictures by Otto Perry, Denver, Colo.

Forming the west side of Colorado's famous narrow gauge circle, the three-foot gauge Rio Grande Southern is a 162-mile line dear to the hearts of railroad photographers. Last June Otto Perry climbed the rocks above Ophir Loop, high in the San Miguel Mountains of Southwestern Colorado, and photographed the RGS crawling through Lizard Head Pass. At left above, one of RGS's converted Pierce Arrows, called Galloping Geese, climbs to Lizard Head. Above is a freight on the same location. Below is the view looking down over the trestle at Ophir. At lower left is a freight at Lizard Head Summit.

Photo 1

Photo 2

Photo 3

Oklahoma Scene

I did a little train shooting awhile back and thought you might like to hear about it.

Went up to Elk City, Okla., on the Rock Island's Memphis-Tucumcari line. Elk City is on Elk Creek and the track goes upgrade both ways out of town. It was then 4:15 p.m. and train No. 112 was marked for 4:45 p.m. We drove east on some country roads to see what the possibilities were and saw the smoke of a westbound freight. I made the most of the only spot available at the moment and snapped him at 4:25 p.m. as he rolled downgrade (sans smoke) going to Elk City for a meet with No. 112. (Photo 1.)

We soon decided the best spot to shoot eastbound trains at that time of day was just east of town from the top of the stockpens. So we hurried back there and at 4:50 p.m. got a shot of eastbound No. 112, the *Memphis-Californian* leaving town with 11 cars. (Photo 2.) No. 111 had been marked late so we loafed around the stock pens waiting for No. 52, the *Choctaw Rocket*. About on time we heard it whistle west of town, and at the same time No. 111 showed up from the east. The place was no good for shooting westbound so we let it glide on into Elk City for a meet with No. 52. After a short pause at the station the *Rocket* came roaring around the curve leaving town at 5:50 p.m. With it on the film (photo 3), we quickly jumped into the car and headed west of Elk City to get No. 111. As it has quite a bit of station work we were able to get out far enough to find a good spot and caught it at 6:05 p.m. working hard upgrade on its way to California. (Photo 4.) We called that good and went into town for a bite to eat.

Preston George.

Photo 4

Water Stop

Photographer Frank Quin, who has most recently been in the Army, took many unusual photos in eastern New York state. This is an extra (see white flags) Boston & Maine freight train stopped for water at Johnsonville, N. Y. The headlight was lit at Quin's request. Although a New England road, B&M has more mileage in New York state than in Vermont.

Courtesy Southern Pacific.

The Cascade

The evergreen is characteristic scenery along much of Southern Pacific's Cascade line, which is built high in the Cascade Mountains for much of the run between San Francisco and Portland. This is one of the two lines which make up the Shasta Route, so called because it runs practically around the shoulder of majestic Mount Shasta. The Cascade, above, is the all-Pullman train over this line.

Engine Terminal

The east portion of the Milw
Milwaukee with the Hiawatha
against the bright grass of ea

Linn H. Westcott and A. C. Kalmbach.

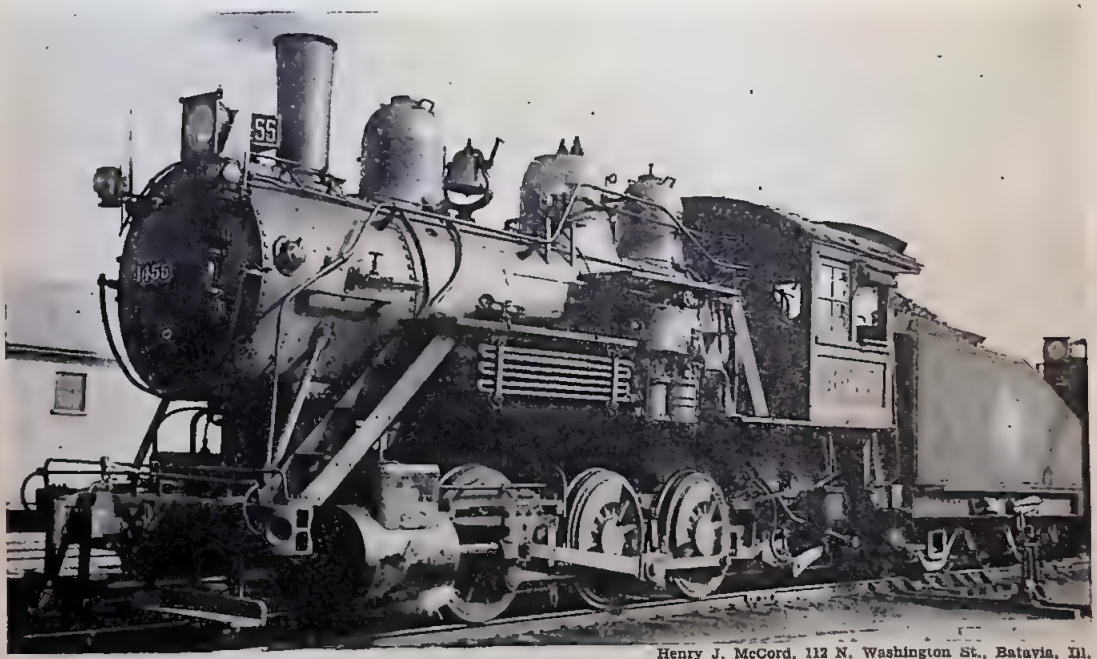
ukee Road's engine terminal at weeping around a mainline curve rly summer. Two roundhouses are under and behind the viaduct from which the Kodachrome was taken, and locomotive and car shops are beyond the roundhouses. The Waukesha Rapid Transit interurban line is on hill at far left.

Of 4000 horsepower passenger Diesels the Milwaukee has two, one Alco-built and one Electro-Motive, shown here. Each runs a round trip daily between Chicago and Minneapolis. Five more are on order from Electro-Motive.

Thirteen 5400 horsepower Electro-Motives are in freight service. The first worked the stretch between the two electrifications, from Avery, Idaho, to Othello, Wash., taking the same heavy trains handled by the electrics to east and west.

Milwaukee Road Power

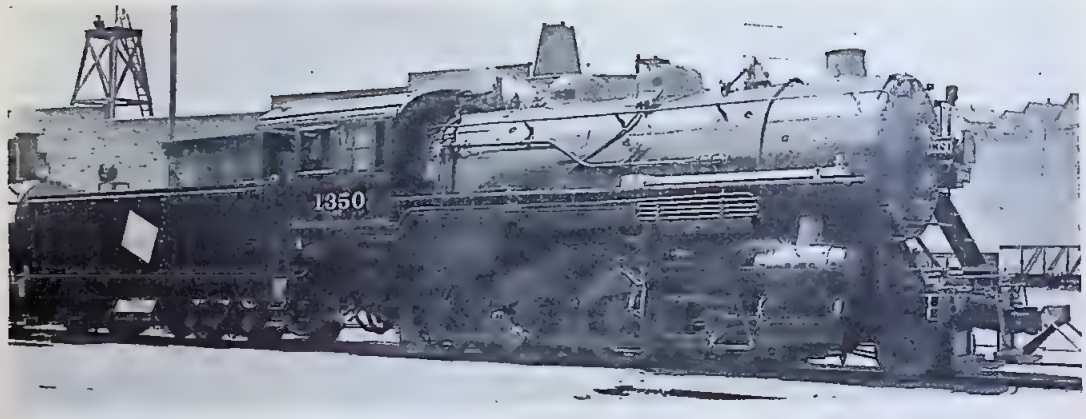
A photographic review of the 1194 locomotives on the Milwaukee's current active roster



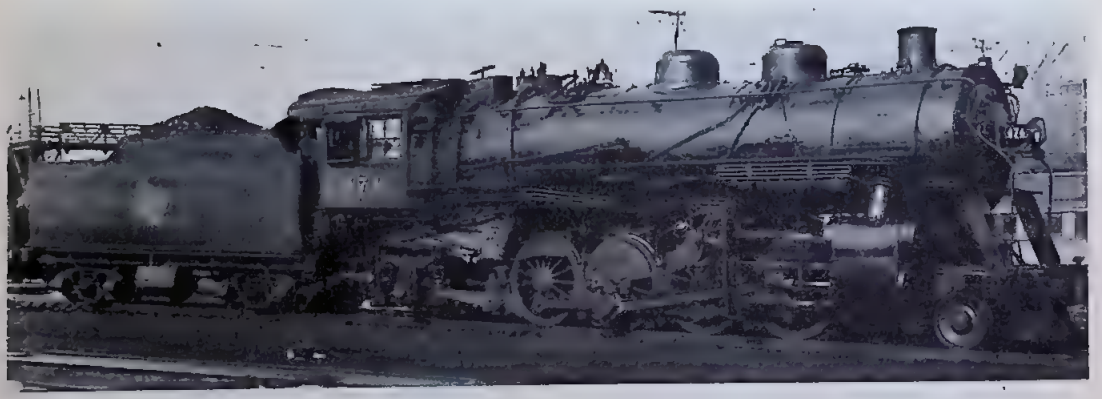
Henry J. McCord, 112 N. Washington St., Batavia, Ill.

76 1-5a Although the Diesel switcher is gradually forcing the steam powered 0-6-0 switcher into extinction, the Milwaukee still has 86 of the six-coupled jobs in service, of which 76 are the class shown in the photo, built at the Milwaukee Shops in the decade from 1903 to 1913.

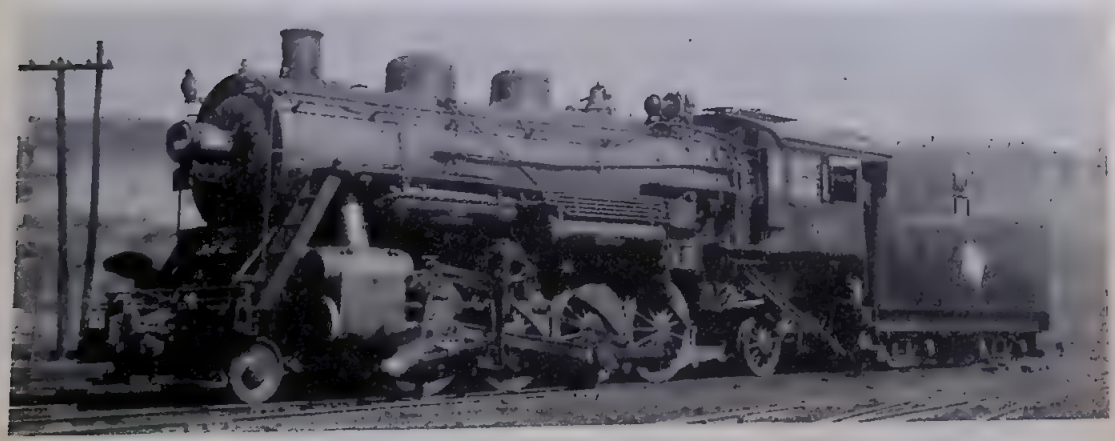
40 K-1 The Milwaukee's Prairie type locomotives were designed as first cousins of the road's first Mikados, as the 2-6-2's were to haul freight trains in the more level portions of the system and the 2-8-2's, which had the same size drivers and the same general design, were used on the mountain sections. But 40 Prairies now survive of a total of 195; 70 were built in the Milwaukee Shops and the rest by Alco.



17 C-7 The heavy thick boilered class C-7 Consolidations were built by American Locomotive in 1910 through 1918 and were inherited by the Milwaukee from its Indiana subsidiary, the Chicago, Terra Haute & Southeastern. They are part of 128 Consolidations at work on the system.



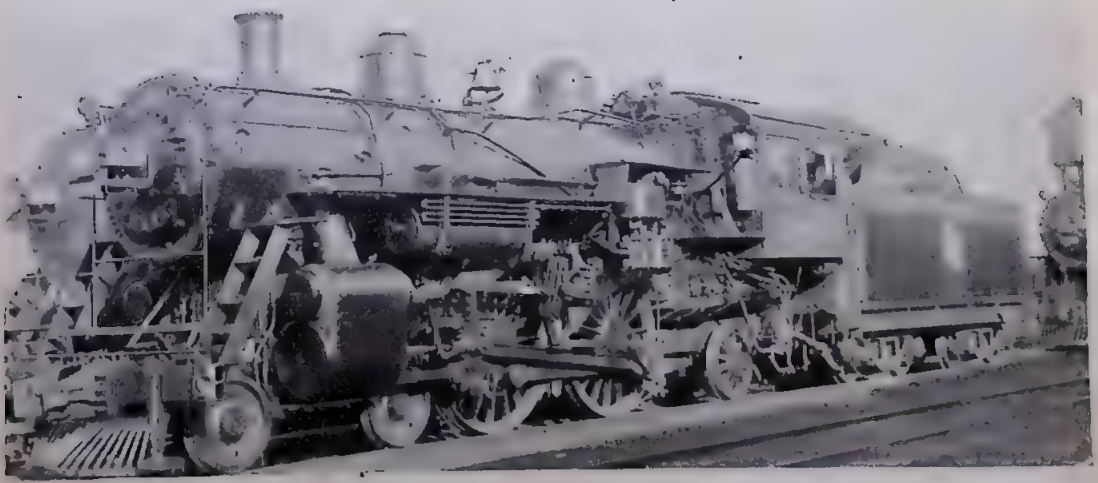
323 L-2 Like many another Midwestern railroad, the Milwaukee was for many years strictly a Mikado road as far as freight service was concerned. It had originally 500 2-8-2's, of which the 100 L-2b's (above) are among those still in service. These are the latest Mikes, built by Baldwin in 1923, although the heavy U.S.R.A. Mikados of class L-3, built in 1918 and 1919 by Alco, are heavier.



14 L-las The 14 Mikados of class L-las are the sole survivors of the original 20 Mikes built in 1909 by the Milwaukee Shops. They are the first cousins of the Prairie type shown on the preceding page.

99 L-3 Heaviest freight power on the Milwaukee until the advent of the 4-8-4's was the U.S.R.A. heavy Mikado, class L-3 and L-3a, of which there are a total of 99. The L-3's differ from the others in that boosters have been applied. The Milwaukee now has 436 2-8-2 locomotives in service, 14 of class L-1, 323 of the various modifications of the L-2, and 99 L-3's.

3 H-8 Once upon a time, as in all good railroad stories, the Milwaukee was powered exclusively by the American Standard 4-4-0 type of locomotive. But now only three are left, 34, 35, and 36, Rogers 1904.



7 B's Some of the Milwaukee's oldest power and some of its newest is of 4-4-2 wheel arrangement. The seven Atlantics similar to the above were built by Baldwin between 1896 and 1909.

4 A's And here is one of the newest Atlantics in the country, the high speed 4-4-2 designed in 1935 to pull the Hiawatha at speeds up to 120 miles an hour. Four of these are on the job.

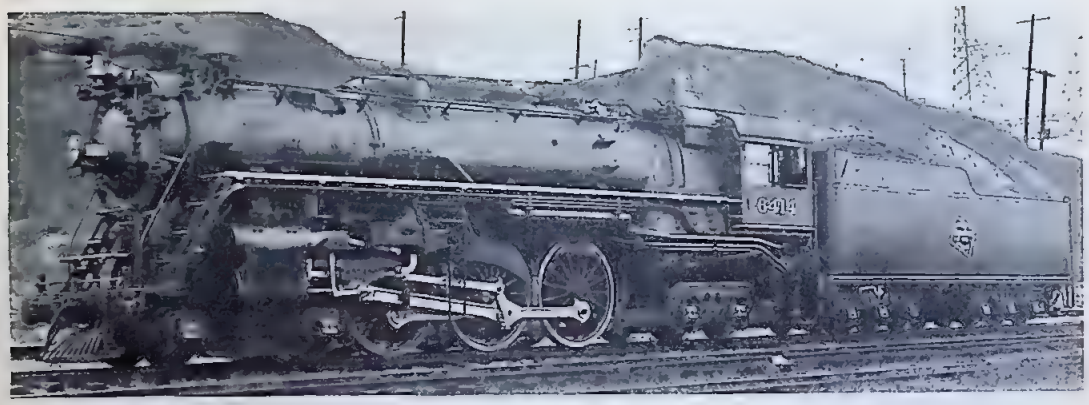
12 G-6ps The 12 types or sub-types of Ten-Wheelers still in service on the Milwaukee were originally designed for a variety of services from heavy freight to fast passenger trains. A total of 138 of this wheel arrangement is in use.

17 G-8a *Another of the Ten-Wheeler variations. This is an old style lettering and numbering scheme. Highest numbers now are in 1500's, and most road locomotives are numbered under 1000.*

11 F-5b The F-5 Pacifics were originally built with 69-inch drivers for service on the mountain sections of the line, but after the electrifiation they were moved east and drivers became 73-inch.

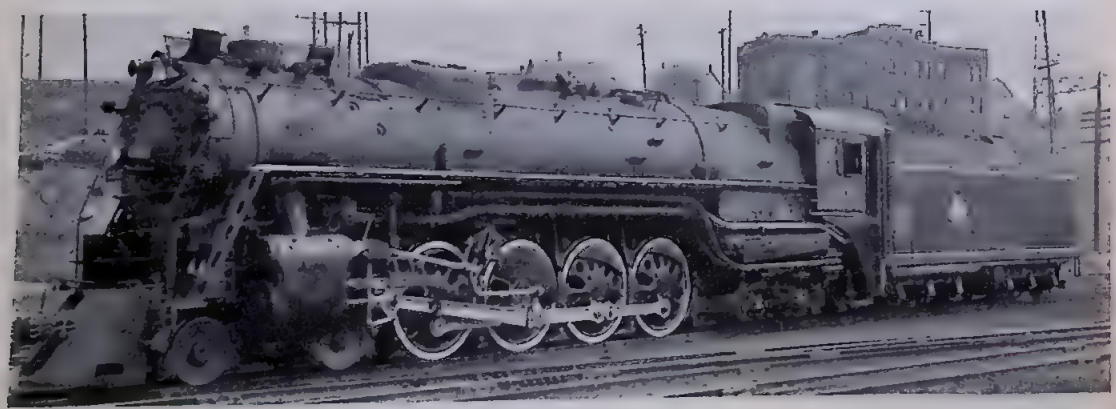
7 F-4ms This is one variation of the 20 F-4 Pacifics built at Milwaukee Shops in 1910. These were in general similar to the F-5's and likewise were intended for mountain service and had 69-inch drivers.

45 F-3s The high drivered (79-inch) F-3 is still a favorite fast passenger engine, in spite of the Hudsons and the Diesels. It pulls many of the faster than mile-a-minute Chicago-Milwaukee non-stops and some of these engines have been streamlined, Hiawatha style, for the Chippewa. Total Pacifics in service, 125.

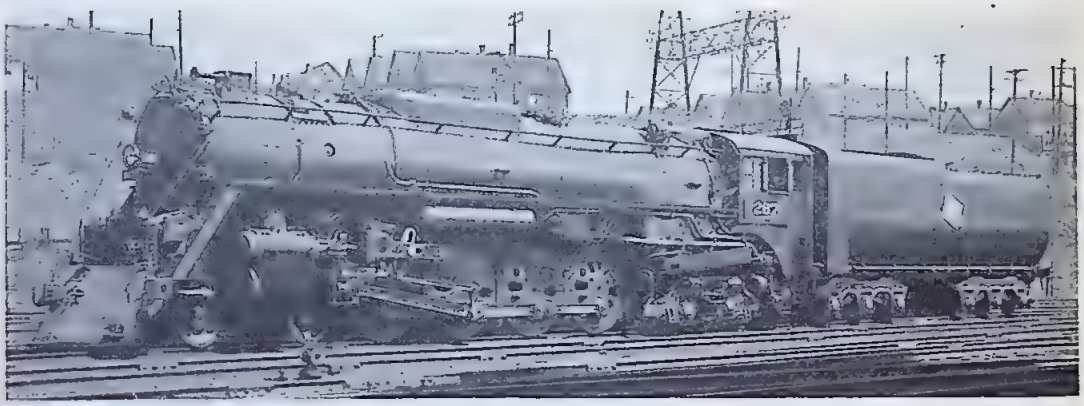


21 F-6 The new era of steam locomotive design on the Milwaukee began in 1929 with the F-6 4-6-4 type of which 14 were built by Baldwin. Seven more F-6a's followed, as shown in the photo. These 21 engines handle much of the heavy passenger work on the Minneapolis and Omaha main lines.

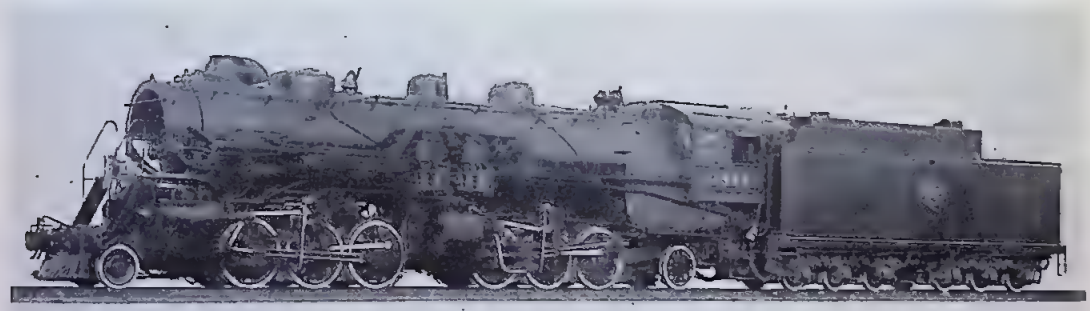
6 F-7 High drivered, with 84-inch wheels, the streamlined Alco-built 4-6-4 Hiawatha locomotives are among the fastest steam jobs in existence. They work some of the Hiawatha runs as well as heavy overnight trains like the Olympian and Pioneer. Hiawatha Atlantics burn oil, these coal.



40 S-2 The first 4-8-4 on the road was the S-1, built in 1929 along with the F-6's and with some of the same parts and design features. Now two S-1's, 40 Baldwin-built S-2's and 10 Alco S-3's (see next page) have replaced a larger number of Mikes on freight and in passenger service.



10 S-3 The S-3 is a war baby, built under W.P.B. restrictions. A 4-8-4 lighter than the S-2 was needed so it could be used more generally on the system. To meet wartime requirements an existing design had to be picked. The D&H 4-8-4 was used on a Rock Island frame with a UP tender.

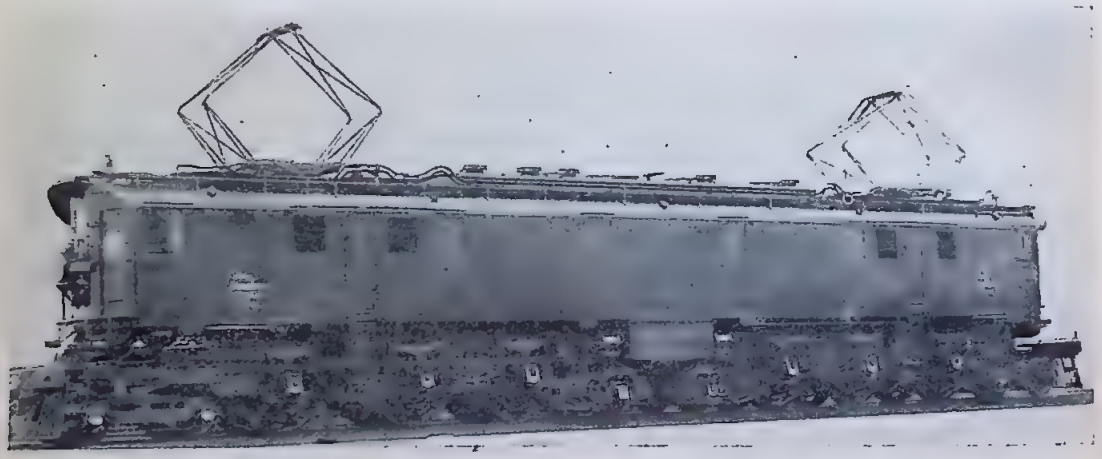


17 N-3s This is simple articulated rebuilt from original Mallet compounds which were once used in the mountains and for pusher service. Total of 20 articulateds are all out West.

12 EF-3 Older two unit freight electrics were recombined into three-unit jobs just before the war so as to haul heavier trains over the four mountain crossings which are electrified for 656 miles.

8 The newest type of Diesel switcher is the Fairbanks-Morse, of which the Milwaukee has eight of 1000 horsepower. These have the opposed piston engine, two pistons in each cylinder.

20 Of the 45 1000 horsepower Diesels on the road 20 were built by American Locomotive, 12 came from Baldwin and five from Electro-Motive. A total of 86 Diesel switchers is in service at present.



10 EP-3 Of the 52 electric locomotives in service on the mountain sections 10 are single cab passenger, built by Westinghouse and used over the eastern 440 miles of electrification, across the Rockies, Belts, Bitter Roots.

12 The Baldwin Diesel switcher can be recognized by its round screen in the front end. This is one of the 12 1000 horsepower Baldwins. One of 600 horsepower is also on the job.

5 Electro-Motive has supplied 30 Diesel switchers to the Milwaukee, of which five are the 1000 horsepower size as shown here. The others are 600 horsepower. Alco built four 600 horsepower, and another 11 Diesels of 380 horsepower, various makes, round out the switching roster.

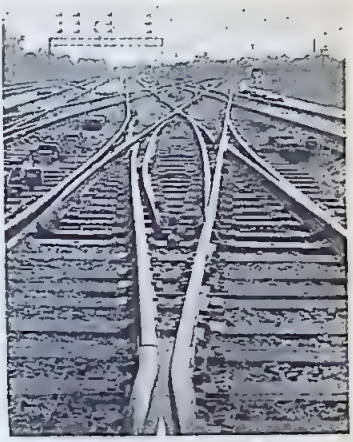
5 EP-2 One of the most unusual electric locomotives in the country is the jointed cab, multi-wheeled EP-2, of which five were built by General Electric in 1919 to pull passenger trains on the 216-mile Cascade Mountain section of electrification into Seattle and Tacoma. This is called the "bipolar" type, due to the armatures mounted directly on axles. Milwaukee runs on 3000 volts D.C.

Courtesy Kansas City Southern Railway.

New Kansas City Ticket Office

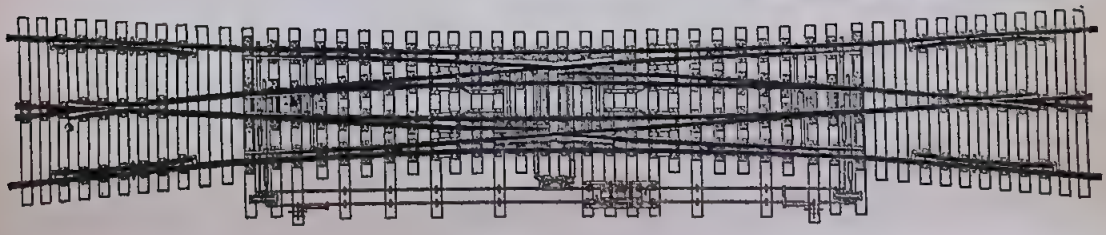
Kansas City Southern is the fastest line between Kansas City and New Orleans, so what better basis for its new Kansas City ticket office than a New Orleans motif. Grilled balconies of the French quarter, scenes of the Mardi Gras, and Jackson Square are all represented.

Linn H. Westcott.



Puzzle Switch on the C&WI

These four photos of a double slip switch at 73rd Street interlocking on the Chicago & Western Indiana show why railroad men call this kind of installation a puzzle switch. The one switch is a combination of a diamond crossing and switches in such a way that trains can follow any of four different routes, straight across in either way or curving in either way. The photos illustrate the four different setups of a double slip switch and the drawing gives the details of its construction. Movable point frogs at the point of crossing assure smothest possible running.



Night Scene at Kent Yards

At Kent, O., just east of Akron, the Erie has a division freight yards where this impressive silhouette was taken. This is the east end of the Kent Division and the west end of the Mahoning Division.

Southern Pacific's *Great* war record

The stream-lined *Daylights*, powered by Lima-built 4-8-4s, were first introduced by the Southern Pacific in 1937, on the coast line run between San Francisco and Los Angeles. Their appeal was immediate, and, with their companion *Daylights* on the San Joaquin Valley route, they soon rated among the most popular trains in America.

Came the war, and the *Daylights* played a vital part in military movements, handling 833,510 passengers in 1942, 1,153,585 in 1943, and 1,268,008 in 1944. Now busy in aiding the homecoming of thousands of veterans, the Lima-powered *Daylights* soon again will be speeding vacation travelers over the Southern Pacific's famous scenic routes.

LIMA LOCOMOTIVE WORKS INCORPORATED

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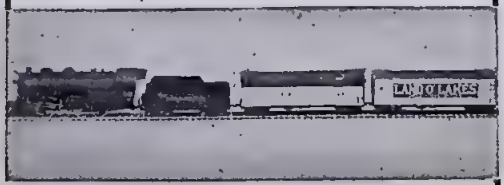

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Grand Trunk Hot Spot

PHOTOS BY BURDETTE SHATTUCK
ARTICLE BY CLELAND WYLLIE

If you've ever ridden the Grand Trunk Western, you've heard of Durand, Mich!

Unless you are aboard the Grand Trunk's westbound *International Limited*, your train remains alongside the big depot at Durand long enough for even the most bored passenger to show some interest in the identity of the town. The departure of a considerable percentage of the passengers from the train and their replacement by another horde never fails to create interest.

For Durand is the place where the main line of the Grand Trunk Western, running between Chicago and Port Huron, Mich., crosses the Grand Trunk's Detroit Division, which connects Detroit with Michigan's second largest city, Grand Rapids, and continues on to Muskegon, on the shores of Lake Michigan.

To orientate yourself, Durand is 253.5 miles from Chicago. The Grand Trunk's main line runs in a curving arc across southern and central Michigan to connect at Port Huron with the rails of the Canadian National, owner of the GTW. Port Huron is 80.2 miles east of Durand with Detroit 67 miles to the southeast.

Durand's population is 3127, but each week from 1600 to 2000 passengers board trains there, either starting their rail journey or transferring from one train to another. This figure used to run approximately 1000 higher per week before increased travel caused the Grand Trunk to resume operation of through coaches between Chicago and Detroit on trains Nos. 6-28 and 57-5. Later on, through coaches also were put in operation between Chicago and Detroit on trains 20-56 and 21-17. Holiday travel also causes a considerable increase in the figure.

Changing trains has been a custom at Durand ever since the rails of the C&NE crossed those of the Detroit, Grand Haven & Milwaukee, Michigan's pioneer rail line, in 1877. Both of these lines are now incorporated into the Grand Trunk Western. Back in the days when railroads were the only means of travel, it was said that everybody in Michigan changed trains at Durand sometime during his life.

The Junction House, operated by the Thomas family and aptly named since it was a short distance from the point where the two railroads crossed, was famous in those days as a hotel and restaurant. The Junction House is no longer in existence, but wartime travel brought back big crowds around Durand's depot at train time. These crowds had grown thin during the late '20's, but an upward trend was visible when fares were reduced in 1936, and the big surge upward brought on by the war is still being maintained in the early months following peace.

High spot in the day for a big crowd at the Durand depot comes every afternoon between 3:30 and 4 when four passenger trains arrive and depart, exchanging large quantities of passengers, mail, express and baggage. Two mainline trains, No. 17, the *Inter-City Limited*, from Montreal to Chicago, and No. 20, the *Maple Leaf*, eastbound to Montreal, meet with Nos. 21 and 56, operating between Detroit and Muskegon. No. 21 brings a through coach from Detroit for No. 17 while a coach is cut off from No. 20 to be sent through to Detroit on No. 56. A mixed train leaves at 4:15 for Bay City.

While this afternoon show is the best, it is only one of three performances during each 24 hours at Durand. Next in importance takes place between 1:10 a.m. and 2:15 a.m. with three trains involved. No. 5, the *LaSalle*, pulls in from Montreal loaded down with passengers, mail and express. This train leaves Durand with an even heavier load since it picks up one or two Pullmans, a through coach from Detroit to Chicago, and one or more express cars which come in on No. 57 from Detroit. The other train in this early morning show is the eastbound *International Limited*, No. 14, from Chicago.

Nearly two hours after this busy period at the Durand station, No. 15, the westbound *International Limited*, comes racing in from the east to make only a momentary halt before rattling across the diamonds on its way to Chicago. This train picks up passengers at

D. W. Yungmeyer, 5116 Dorchester Ave., Chicago 15, Ill.

Grand Trunk Western No. 56 leaves Muskegon for Detroit via Durand.

All the kaleidoscope of mid-afternoon action at the GTW Station, Durand, Mich., is caught in this montage. The train at top is the westbound Inter-City Limited from Montreal to Chicago. Detroit trains are in middle photo.

With trains to and from Chicago and trains to and from Detroit, with a mixed train for Bay City thrown in for good measure, the minutes just before 4 p.m. present a busy spectacle on the platforms of Durand.

Durand only in cases of real emergency.

The third performance at Durand is set between the hours of 5:30 a.m. and 7 a.m. when three trains depart for Detroit, and No. 6, the *Inter-City Limited*, comes in from Chicago. A Pullman, coach and express car are detached from No. 6 at Durand and hooked onto No. 28 for Detroit.

Less spectacular arrivals at Durand are staged by a mixed train from Bay City, Mich., which arrives over a branch line of the Grand Trunk each afternoon except Sunday, and by the Ann Arbor's two passenger trains which operate on leisurely daily-except-Sunday schedules between Frankfort, Mich., and Toledo. The Ann Arbor uses the Grand Trunk's passenger facilities at Durand. A lone performer on the Grand Trunk is No. 19 which runs on a late afternoon suburban schedule out of Detroit and reaches Durand at 7 p.m. each day except Sunday. Long troop trains are also now a regular feature of passenger traffic through Durand.

While the passenger trains draw the crowds, Durand's major role is in handling freight traffic. Freight cars to and from Detroit, Pontiac, Grand Rapids, Muskegon, Bay City and Saginaw, all cities of importance in Michigan industry, are either mingled or extricated from the heavy flow of freight between Chicago, Canada and the Eastern United States. Cars handled on Grand Trunk car ferries between Milwaukee and Muskegon, plus interchange with the Ann Arbor, which runs six scheduled freights through Durand, contribute to the volume of cars handled in the Durand yard.

Nineteen scheduled freight trains are made up or broken up at Durand, and 12 scheduled freights on the main line, plus six to eight extras, pick up and set off cars there.

All of this requires a lot of switching in the extensive yards which spread out in all directions from the Durand depot. Ten yard assignments work daily. Since the wartime output of Michigan's factories is less bulky than the peacetime traffic from the automobile factories, the daily average of cars handled at Durand is about 1500 cars, some 700 to 800 below the peacetime level. The record day

A streamlined 4-8-4 pulls the Inter-City in from Canada while a Pacific waits with No. 21 from Detroit to Muskegon. Below is No. 21 leaving. Departure of mixed train for Bay City at 4:15 ends Durand's busy half hour.

was set on March 12, 1937, when 2698 cars were switching at Durand with 37 freights arriving and 38 departing.

Railroad fans find Durand an interesting spot, and postwar camera addicts will find a variety of motive power to photograph. On the main line, 4-8-4's predominate with streamlined 6400 series engines on passenger trains and 6300 series on freights, although the more powerful 6300's can be used on passenger trains if necessary. The Detroit Division features 2-8-2's on freights with Pacifics for passenger service.

Ancient Atlantics haul the passenger trains on the Ann Arbor with 2-8-2's on freights. Other motive power to be viewed includes a light Pacific on the mixed run of the Grand Trunk between Durand and Bay City although this may be displaced by Diesel power before this article is published, and 0-6-0 and 0-8-0 steam switchers as well as two Diesel switchers.

Besides the big depot, Grand Trunk facilities in Durand include a 37-stall roundhouse, a car department, building department, and a large freight transfer dock.

The discharged veteran wears this emblem. Remember his service and honor him.

KNOW what the railroads are doing — now that the war is over?

They're moving troops! West Coast, East Coast, up and down and across the country — *more troops are moving right now than at any time during the war* — 1,300,000 in November with still more coming in December, and it's going to be much like that for several months to come.

But this time they're headed mostly toward home, and although the job of handling so many in such a short time is another challenge, it's a job the railroads tackle with enthusiastic determination. Still in their fighting togs, they will keep right on — providing 97% of all the transportation for military personnel traveling under orders.

Plans for the future? Yes — the release of material which could not be had during the war has enabled railroads to get started on a large-scale program of improvements all along the line. They are looking ahead, and working with foresight and confidence to new high standards of efficient operation and service.

But first of all they're bringing these young men back home.

AMERICAN RAILROADS

—CARRIED MORE THAN 90% OF ALL MILITARY FREIGHT AND PASSENGERS—

RUNNING EXTRA

When the photographer who took the candid photos running in this series of introductions to Kalmbachians prepared to shoot A. C. Kalmbach, he ran into difficulty. No amount of the photographer's stock of devices could coax out that relaxed grin synonomous with Al. Finally, Joe O'Hearn, research editor, stepped to the door and said, "Al, imagine you've just fired me!" It worked, much too well. Far removed from any grin, this guffaw hardly looks like the usual boss greeting his employees and readers.

Without his knowlege, however, the picture was chosen as an apt personification of Al Kalmbach. For Al is not the usual boss. Some things could qualify as being average. On a good day, with the right wind, he plays an average game of golf. Last year, with the aid of a book from the Milwaukee library, he managed to emerge from the company checker tournament with a $6 profit. Next to an interest in railroads, his greatest delight is in collecting and playing fine symphonic recordings, and he'll admit it's often quite a struggle to choose between adjusting the Capehart or delving into some phase of railroading. A family man, his wife and three children share his interest in railroads and music.

Those are typical things which inspire the comradery spirit basic in all the relations of the workers of KalmPubCo. But Al's qualities which cause his employees so much to respect him border on the phenomenal. An extremely hard worker himself, he conducts his business on the theory that not only is each one of some 40 employees capable of assuming individual responsibility for getting a magazine out, but also that each of their opinions are worthy of enough weight to even outride his. His amazing knowlege of railroads is unquestionable and he has played a leading part in the planning of Milwaukee's proposed transportation changes. Few can approach his understanding of transportation; fewer still his executive ability.

The Employees.

Railroad

Underground Squeeze

The original Interborough subway in New York City was 41 years old on Oct. 27. On that day, which happened to be Navy Day this year, there were so many people using the subway to get to where they could see the President and the fleet in the Hudson River that the subway was slowed down to a walk. It required 45 minutes to make the run from 14th St. to 72nd St., ordinarily an eight-minute run. There were at one time 10,000 people waiting to get into the station at 72nd St. and Broadway and the entrances had to be closed for a time to let people out of the station. Old timers said the subway had never been so crowded before, and if you are familiar with the subway in rush hours you will know that on Navy day it must have been crowded.

G. W. O'Connor, McLaine St., Mt. Kisco, N. Y.

Short Line

While digging out article material from the Railway Guide, I have discovered what seems to be the shortest rail line of all, the Pioneer & Fayette Railroad which has one half mile of track at Franklin Junction, O. This line is not a member of the American Short Line Railroad Association. Minnesota Transfer Railway of St. Paul has 13 miles of main line with all of 97 miles of yard tracks and sidings.

Raymond Moody, 43 Balmiere Pky., Cranford, N. J.

South of the Border

The main line of the Ferrocarriles Nacionales between Torreon and Gomez Palacio is, of course, single track, and apparently all engines of trains arriving at Torreon in the afternoon have to wait there until the last train is in before setting out for the roundhouse at Gomez. At least, we noticed that every day about supper time a parade of engines backed over the bridge and let loose the most dismal and hair-raising wails—the whistles all sounded like overblown organ pipes. Once I arrived just in time for ceremonies dedicating the new C.T.C. system which had been installed between Torreon and Gomez Palacio. The celebration was held at midnight. A party of officials proceeded by train to Gomez under the old train-order system and held a great banquet there. Then the power was turned on, the new red and green searchlight signals blazed forth, and they returned to Torreon with C.T.C. protection.

Albert Sprague Coolidge, 18 Coolidge Ave., Cambridge, Mass.

Land of Sleeping Cars

Can any other state beat Minnesota in having more sleeping-car operations directly owned and operated by the railroads, other than Pullman equipment? Here's the list for Minnesota: The Milwaukee Road operates its own standard sleeping cars on trains 11 and 22 between the Twin Cities and Chicago; on Nos. 5 and 6 between Minneapolis and Aberdeen, S. D.; on trains 15 and 16 through Minneapolis between Chicago and Tacoma. The Soo Line uses its own sleepers on the *Winnipeger* between the Twin Cities and Winnipeg, supplementing its Pullman cars; on the *Soo-Dominion* from the Twin Cities to Moose Jaw Lake. The Duluth, South Shore & Atlantic runs its own sleepers between Duluth, Minn., and Marquette, Mich., on the *North Country Mail*. The Canadian National operates sleepers between Duluth and Winnipeg, Manitoba. For through connections to Vancouver via the Canadian Pacific, CPR sleepers come into the Twin Cities. Northern Pacific recently put in service two sleepers on its night trains between the Twin Cities and the Canadian border at International Falls.

George E. Kottke, 4014 East 55th St., Minneapolis, Minn.

Mail

Correcting the Corrections

The longest tunnel in the world is certainly the Northern Line of the London Transport Underground from Golders Green to Morden (via the Bank), but this is only about 16¾ miles long and not the 60 odd quoted in a letter from this country and published by you. In the July TRAINS a correspondent writes that the LNER's "Cock-o-the-North" type 2-8-2's have been changed to 4-6-4's. Actually they have been changed to 4-6-2's. The political situation here is such that unification and nationalization are possibilities, but the four main lines still operate very independently.

Douglas V. Ellison, 185 Passfield Ave., Eastleigh, Hants, England.

It Shouldn't Happen to a Tunnel

I left Perth Station in the cab of a little Pr Class Pacific. Next day I got on the engine and went all day across that famous 330-mile trans-Australian tangent in an old Ten-Wheeler whose bouncing cab had become disconnected from the frame and made it impossible to stand up without holding on to something. My driver friend told me that this tangent would have been 15 miles longer but for the fact that when the track laying crew from the west joined up with the construction gang from the east they found they were on parallel lines but 15 miles apart, necessitating a pair of curves in order to join up. This could hardly be an engineering error. Probably they were laying track so fast they feared a head-on collision.

Courtland Christianni, Perth, Australia.

Eastern Autumn in October

I had the pleasure of basking in the sun amid the red and gold landscape of New York State's Putnam County and got a real kick out of seeing New Haven's two-unit, 4000 horsepower green and gold Diesels trailing 80 and 90 car hotshots eastbound out of Maybrook and really rolling through those gorgeous hills! Steam interest was not lacking either because one of the NH's 2-10-2's would breeze by eastbound or labor by westbound occasionally. In many ways the Maybrook line of the New Haven has more romance than any other part of the system since it is less urban, features only time freights and drags, is at least a full division in length, runs through rugged country, and has its western terminal in that magic region for all fans in this part of the country, Maybrook and Cambell Hall.

Jim Bennett, 19 Highland Rd., Stamford, Conn.

The Puffing Fuehrer

The rail lines are being repaired rapidly in France and the Alps. They are almost on the old schedules, but in Bavaria and Germany proper it will be quite some time before they are operating like anything of old. Although all lines are open, all are operating single track, due to bridges being out.

Edwin B. Miller, APO 90, c/o Postmaster, New York, N. Y.

Your reminder is at hand about the renewal of my son Edward Sanderson's subsciption. I regret to say that he was killed in action last November in Germany. He always took great pleasure in reading your magazine, and one of his happiest moments was to see in print the article he had submitted to you in competition on "Railroads in Massachusetts." His deep absorption in railroading wherever he traveled both here and abroad mitigated greatly the grimmer aspects of soldiering, and I wish to thank you for your contribution to what satisfactions a 19-year-old had time to find.

Mrs. Bennett Sanderson, Oak Hill Road, Littleton, Mass.
[Edward Sanderson's excellent story appeared in March 1944 TRAINS—Ed.]

SECOND SECTION

We never knew we had so many readers who would win first prize in the contest announced in the August 1945 TRAINS. But out of the hundreds of entries submitted exactly 46 readers not only arrived at the shortest possible time to visit all the state capitals but also did it in identically the same time, thereby tieing for first place. The winners arrived in Chicago at 1:21 p.m., September 28, 1945, on Milwaukee Road train No. 28 from Madison, Wis.

Since the combined first, second, and third awards divided 46 ways might be rather disappointing to the winners, we are offering them a run-off contest in addition to the prize money already won. The run-off contest is so planned that the final first prize money definitely will go to only one contestant.

Because of the great interest shown in this contest, a similar prize contest will be offered to all readers of TRAINS in a few months, following further, more detailed announcements of this first contest.

The first contest winners, in addition to getting their share of the prize money and an opportunity in another contest, were sent an autographed copy of Edward Hungerford's new book, "Railroad for Tomorrow."

The annual index for TRAINS Volume Five, November, 1944, to October, 1945, inclusive, will be mailed to all direct-mail subscribers to TRAINS as soon as completed. Other readers may obtain one free by writing for it. Readers who wish their sets of TRAINS bound in annual volumes may send their copies in during the months of December and January. It is important that these copies arrive before the end of January because magazines are sent to the bindery only twice a year. Copies received during January will be delivered in February. Copies received after that date cannot be delivered until August. The charge for this service is $2.50 per volume.

Some back issues of TRAINS are still available. They include: January, 1942; February, March, April, May, June, August, September, October, November, December, 1943; March through December, 1944; January, February, April, May June, September, October, November, 1945. Priced at 25 cents each postpaid.

TRAINS Bound Volume Five, complete with index and including all issues from November, 1944, to October, 1945, will soon be available. Attractively bound in maroon imitation leather, with gold stamped lettering, these books are well worth the price of $4. We still have some copies of Volume Four at the same price.

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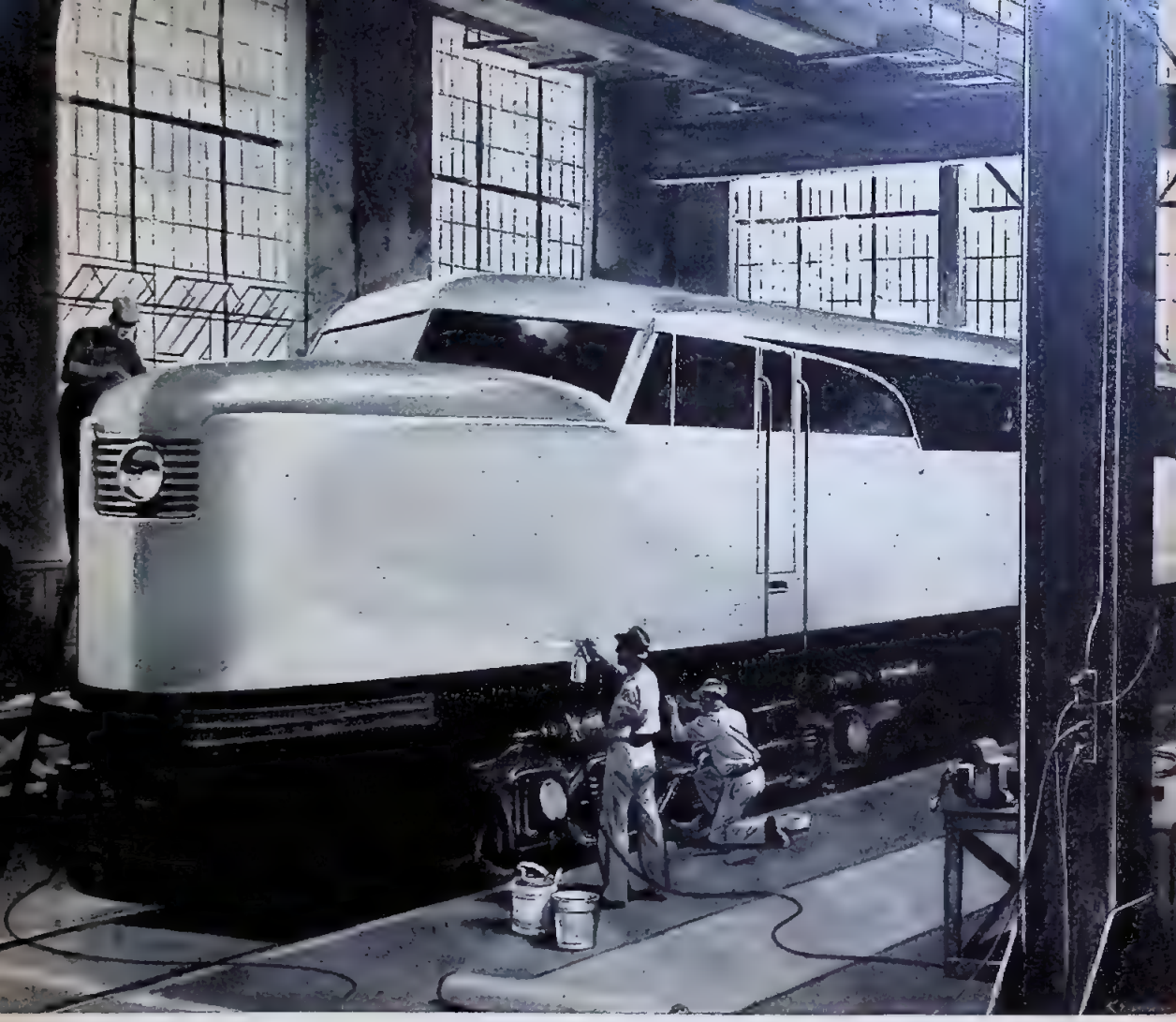


How much is a locomotive worth?

THE *price* of a locomotive may range up to half a million dollars—or more. But its *worth* depends on what it can do.

You see, there are many different kinds of jobs that locomotives must perform for a railroad. It has been common practice to meet this problem by using many different types of locomotives, each specially designed for certain types of work. Passenger locomotives, designed primarily for speed; freight locomotives, built chiefly for heavy hauling; and "helper" locomotives, to assist on steep grades.

Now, however, as a result of long, close cooperation between American Locomotive and railroad designers, locomotives are being built that can do *a number* of special jobs and do them well—locomotives that are truly multipurpose.

For example, the new "Niagaras," built by American Locomotive for the New York Central, have set top passenger-performance records on the crack Commodore Vanderbilt run—and, *in addition*, can pull the heaviest freights at any speeds they wish to run them. The New Haven has a large number of diesel-electrics, built jointly by American Locomotive and General Electric, that are doubling in freight and passenger service and doing an outstanding job at both.

The new steam locomotives, built by American Locomotive for the Delaware & Hudson, are now hauling heavy trains, unassisted, over steep grades where formerly it was necessary to employ two or three "helper" locomotives.

This development means real economy, because it reduces the number of locomotives a railroad needs to do its job. And that's important to you. For the more money a railroad can save, the more money it has to improve its service.

This is one of many developments that will contribute to finer railroading. And it is significant that it comes from the Company that designed America's first diesel-electric locomotive, built the world's largest steam locomotive, and supplied many of the war locomotives used by the United Nations.

American Locomotive

Alco

THE MARK OF MODERN LOCOMOTION

Surplus Power

On mountain grades trains are often double-headed, and long, heavy limiteds sometimes run with two engines to keep schedule in spite of excess tonnage. An unusual sight is a train of only five coaches pulled by two engines in the level country of the Midwest. Yet this happens every day on the Eastern Division of the Chicago, St. Paul, Minneapolis & Omaha (a subsidiary of Chicago & North Western), where local 508 is double-headed from Altoona to Elroy, Wis.

No. 508 comes down from Minneapolis, with a consist of a mail car, combination baggage-smoker, baggage car, and two coaches. At Altoona a second engine is added for the 105.4-mile run over flat ground to Elroy.

Here is the explanation: Over this part of the Eastern Division, the Omaha runs four passenger trains westward and only three eastward. Local 508 takes an extra engine eastward to be used for the extra westbound train.

Is It Worth It?

The cost of eliminating all highway grade crossings and replacing them with underpasses or overhead bridges would equal nearly three fourths of the total railroad investment in the United States, 226,938 of them at $85,000 each.

Barrymore Just Chartered a Train

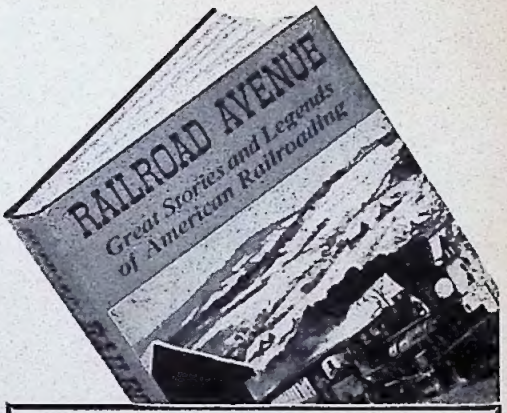
John Singer, producer of "A Stubborn Cinderella" in which the late John Barrymore starred in 1909, tells a railroad yarn about the Great Profile. John never missed a performance, for all his carousing, although one night they had to ring up the curtain in Chicago without him. Then, while detectives were scouring the cafés in a fruitless search, Barrymore appeared in the lobby of the theatre. He was pulling off his gloves, bowing to the box office men, and introducing a railroad engineer and fireman.

"Show my friends in to the best seats," he said. "Mort, I'll see you later!" In a few minutes he had replaced his understudy on the stage.

It developed that John had awakened at noon somewhere in Michigan after a party the night before. After asking what day it was and what time of day, he then learned that no trains could get him to Chicago in time for the theatre. He went down to the railroad yards, hired a locomotive at $1 a mile, and traveled in the engine cab with just the fireman and engineer. The trip cost him $320, but he said it was worth it.

U. S. Railway Mileage

The 227,999 railroad miles in the United States are 30 per cent of the world's railway mileage, although we have less than six per cent of the world's land area and population. One U.S. railroad company has more Diesel horsepower in service than have all the railroads of the world outside this country.



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—Henry B. Comstock,
Editor, Railroad Magazine.

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Here, in short, is a rich and delectable bill of fare for everyone who feels the romance of the rails, profusely illustrated with old prints and photographs.

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Edward Hungerford's RAILROAD for TOMORROW

Described by N. R. Howard, editor of the Cleveland News, as ". . . filled with the wildest excitement . . . a beautiful manuscript" and by E. S. French, president of B&M Railroad, as ". . . extremely interesting and readable" . . . Railroad for Tomorrow will have a directional effect on all plans for railroad advancement. This unprecedented book proposes an unusual yet not impossible method for the railroad industry to successfully compete with other forms of transport in the years to come.

In colorful, detailed description, America's foremost railroad writer takes you 15 years into the future . . . to travel over and examine the railroad network as remodeled into a national federation of regional, privately owned companies. Ride the super-railroad short line across Pennsylvania, the 1960 electric coaches; study the new terminals as proposed for New York, Chicago, San Francisco and other cities. 380 pages, plus 32 pages of illustrations and 2-color maps.

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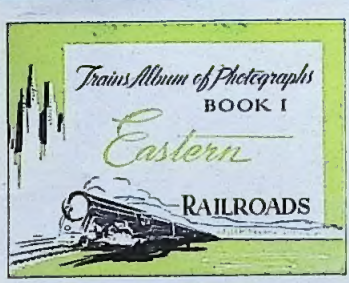
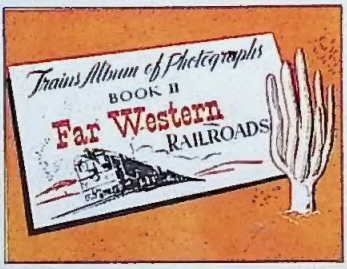
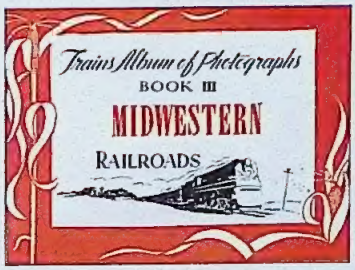


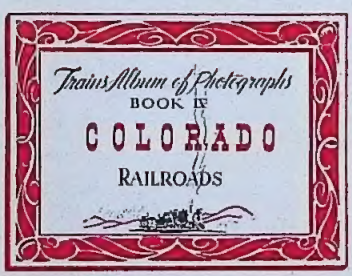
1. Eastern railroads



2. Far Western railroads



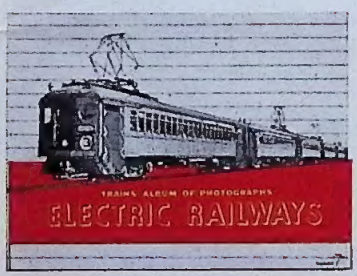
3. Midwestern railroads



4. Colorado railroads

5. Southern railroads

6. New England railroads

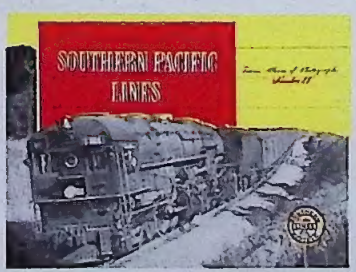


7. Electric railways

8. Pennsylvania Railroad

9. New York Central Railroad

10. Modern Steam Locomotives



11. Southern Pacific Lines

12. Santa Fe Railway

13. Baltimore & Ohio Railroad
(Ready about February 1, 1946)

14. Erie Railroad
(Ready in February, 1946)

15. Great Northern Railway
(Ready in March, 1946)

Something New

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